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ORIGINAL ARTICLES.

ON AN OUTBREAK OF SCARLET FEVER IN GLASGOW CONNECTED WITH AN EPIDEMIC TEAT ERUPTION ON MILCH COWS AT JAAPSTON.

By JAS. B. RUSSELL, M.D., LL.D.,

AND

ARCH. K. CHALMERS, M.D., D.P.H. (Camb.),

Medical Officers of Health, Glasgow.

WITH A REPORT BY DR. KLEIN ON CERTAIN MATERIAL SENT HIM.

"On Friday, 5th August, 1892, when the inspectors returned from their usual round to report upon the cases notified that morning, it was learned that two out of four cases of scarlet fever reported from the southern district of the city were customers of a dairy which had on the previous day been noted as bearing a similar relationship to another case of scarlet fever then reported. On looking over the record of the preceding days, it was seen that on Friday, 29th July, one member of a fourth family consuming milk from the same source had been reported as having also developed scarlet fever, so that it was with some anxiety that the notifications, from this district, of Saturday, 6th

August, were awaited. When they came to be investigated, it was found that they represented seven cases in six families, all of which were customers of the dairy in question. We had thus in the three days 4th, 5th, and 6th August, ten cases of scarlet fever in the southern district, all using the same purveyor's milk, and seven of them had come to our knowledge on the last of the days mentioned. Although there had been, during the previous weeks, an upward movement in the number of cases of scarlet fever occurring throughout the city generally, it was sufficiently evident that, in this instance, we were in the presence of a stream of infection which was more than usually active, and was also, from the rapid increase in the numbers attacked within a limited area, probably concentrated. Accordingly, written intimation was at once made to the proprietor of the dairy in question that a number of his customers were being attacked by scarlet fever, and with this was coupled the request that he should furnish us with the source and distribution of his supply. Following this communication events were rapid in their development. The accumulated notifications delivered in course of post between the evening of Saturday, 6th, and morning of Monday, the 8th August, applicable to this district, and with reference to scarlet fever alone, numbered between 60 and 70. It was now manifest that an explosion of some considerable magnitude had occurred, and almost coincidently we learned that the immediate cause thereof had been discovered, and further injury averted. It remained, therefore, for us to ascertain the extent of the mischief already done, and to enquire whether the source of the outbreak could be traced. But, before answering either of these questions, it will be well to relate what transpired at an interview with the purveyor of the milk in question on the morning of 8th current; for, as will be seen, it was owing to his rapid apprehension of the bearing of the queries contained in our communication to him of the 6th August, already referred to, and the prompt action which followed the enquiries he thereupon made, that the outbreak was quelled almost in its incipiency. When the carts delivering the supply of milk to the dairy arrived on the morning of 7th August, he made enquiry at those in charge as to the health of the inmates of the farms from which they came, and, later in the day, he visited the farms, and in the family of one of them found that one member had sickened of scarlet fever on the evening of 4th August. He thereupon directed the supply from this farm to be stopped, and returning to town, withheld from sale between 40 and 50 gallons of that morning's supply from the farm in question (about half the quantity). This he retained until it was afterwards, by direction, destroyed. We had thus gained something like 24 hours in our movements.

"ENQUIRIES AT THE FARM.

"Immediately on learning that the implicated farm was situated in Renfrewshire, communications were opened up with Dr. Campbell Munro, the County Medical Officer, and in each subsequent step in the investigation, outwith the boundary of the city, suggested by what came to our knowledge of the incidents of the epidemic within it, we had the hearty co-operation of Dr. Munro and other members of the sanitary organisation of that county. It should here be stated that when the dates of sickening of the earlier cases occurring among the customers of the Glasgow dairy were compared with the date on which the patient at the farm was attacked, it was impossible to regard the latter's illness as having any causal relationship to the others, and we had, therefore, provisionally formulated the opinion that the cause in operation was common to both. It so happened that our telegram to Dr. Munro, intimating the connection of the outbreak in town with the farm in question, was transmitted to him when he was already in the vicinity of the farm, making enquiry in connection with the illness there, notification of which had, in course, been transmitted to him by the medical attendant. When, therefore, on the following day (9th August) we had an opportunity of consulting with him on the matter, and had heard from him of the condition of things present among the farm stock, it was decided to invite Principal M'Call, of the Veterinary College, to assist us in this branch of the inquiry. Accordingly, on the afternoon of the same day, a conjoint visit was made to the farm, and during this and subsequent visits the following condition of affairs was ascertained:—The farm, or rather farms (for there were two separate houses, Jaapston and Aboon-the-Brae, situated about a mile apart, but under the same control), are situated in an upland and bracing district of Renfrewshire, and on examining the byres and milk-houses, it was at once seen, and we were unanimously of opinion, that the business of the dairy was conducted with scrupulous attention to cleanliness, and that none of the conditions usually regarded as insanitary were present. Further, it should be stated, that although by this time the delivery of milk had been completely suspended, the farmer and all his dependents received us courteously, and displayed every wish to impart information, and to assist us in our enquiries.

"Previous to Whitsunday, his milch cows were kept at one of the farms—Jaapston, and at that date the number in the byres was 45. Two or three days after the term, owing to the business of the dairy increasing, a division was made, and 20 of the cows were sent to Aboon-the-Brae. Between that date and the present occurrence, additions had been made to both stocks—viz., 3 to the lower, and 5 to the upper herd—so that at the time of our enquiry there were in all 53 cows yielding milk. Further, when the illness from scarlet fever in the farmer's family at Jaapston had been brought to the knowledge of the Renfrewshire Authorities, the cattle then in these byres were, by their orders, moved to Aboon-the-Brae, where we found the whole herd on the day of our visit as above.

"HISTORY OF ERUPTION ON THE MILCH COWS.

"In dealing with this, it will, for the sake of historic coherence, be advantageous to place together, in the form of a continuous narrative, all the information which we became possessed of at one time or another during our investigation, it being premised that the importance of many facts, as they came to our knowledge, was only fully apprehended when others, which we subsequently became possessed of, were also known.

"One point may be here referred to, and meanwhile dismissed, because its significance can only acquire due emphasis from the testimony of Principal M'Call. Its importance, however, when placed in conjunction with the conditions to be immediately described, will be readily recognised, and as some mention of it is necessary to give completeness to this statement of the problem which presented itself to us, no further apology need be made for the digression. Mention has already been made of the favourable impression created by the evidences of careful management which were present in all the surroundings of the byres and milk rooms, and it now remains to add that this impression was maintained by the appearance of the animals themselves. They were much of the time in the open air; they ate well, and were well nourished. It was noticed that there was no evidence of general disturbance of the system in any of them—no persistent cough, no increase of temperature, no rough or 'staring' character of their coats —and nothing unusual in the quality of their milk had been observed. The only thing, indeed, that did attract attention, or create suspicion, was an eruption on their teats. This had made its appearance after the following manner:—Prior to the division of the herd at Whitsunday, it cannot, with precision, be affirmed that this eruption was present on any of them. Our first information created the impression that it was not. Later we found that it may have been, because, at Whitsunday, one of the milkers had a sore hand (pimple behind the nail of an index finger), which she connected with some similar condition on the cattle. Questioned further on this point, her impression at first seemed to have arisen from the recollection of one or two of the cows becoming restive while being milked, but it assumed to us a different complexion when she added, in a phraseology which we had now learned demanded careful scrutiny, 'But it was different from now; it began as a scab.' Nothing more definite than this seems to have happened until about four weeks before our visit. At that period there began in the herd at Aboon-the-Brae, a very definite outbreak of the teat eruption, and within a fortnight every animal in the byre was affected. The virulence of the outbreak clearly fixed its occurrence in the memory of all the farm hands, and from this period the succession of events could be distinctly traced. After this had continued for about two weeks in the upper herd, an outbreak occurred in the Jaapston byre, and at our first visit almost all the animals of the latter were suffering.

"APPEARANCE OF THE ERUPTION ON THE COWS.

"The character of this in its earlier stages cannot be described with even approximate accuracy. It is evidently small, and apparently insignificant in its beginning, and does not attract the milker's attention until tenderness causes restiveness in the cow during milking. By this time an ulcerating stage has usually been reached. In one animal only did we find a subcutaneous vesicle not attracting the eye until the finger had first detected a slight thickening or undue resistance on manipulating the teat. This vesicle, on being punctured, exuded a straw-coloured serum. In others there was seen a quasi-papular form, with viscid whitish-coloured contents, which could not be taken up by capillary attraction, while on most of the animals the sore existed as a reddish-brown crust, blackening in the centre, and which could, without much difficulty, be detached from a superficial ulceration of varying dimensions. When this was done, some faintly coloured, and probably blood-stained fluid exuded, or could be pressed out. Three or four of these would be present on a teat, and sometimes all the teats were affected. It was rare to find one present alone. Nor was it with any certainty that their presence could be recognised on the udder. Some few spots did exist, chiefly in the neighbourhood of the base of the teat, but they were of small size, and in appearance suggested drying pustules. There was no attempt here to simulate the scabbing so prevalent on the teats, most likely because of the absence of friction by the finger in milking. Neither was it possible to say that any of the teats were swollen or œdematous, although many were very tender to pressure. Regarding the stage immediately preceding the formation of the crusts, it is impossible to affirm that there was indubitable evidence of umbilication. As to size, many of the spots were barely of the diameter of a threepenny piece, and these were circular. Most, however, were larger than this, and these tended to assume an elongated form—in some cows, of more than 1 inch in length—in the long diameter of the teat. The margin of the ulcers left on separating these crusts was not raised, and, while sharply demarcated, there was no surrounding areola, or secondary vesiculation. In one or two examples, where a previously existing sore (chapped teat) seemed to have afforded the centre for inoculation, a transverse fissure through the crust was present, recalling the appearance of the sore on the fingers of a milker which is still to be described.

"SORES ON THE HANDS OF THE MILKERS.

"Some questions of importance here arise as to the effect of the teat eruption on the hands of the milkers. The uncertain relationship existing between the possible presence of sores on the teats of some animals in the Jaapston byres about Whitsunday and a sore on the hand of a milker, has already been mentioned. This girl went with the part of the herd which was sent to the other byre at Aboon-the-Brae at that time, and, with two others, thereafter attended exclusively to them. In the Jaapston byres there were four milkers also exclusively engaged with the cows there. These had the occasional assistance of the farmer himself, and it seems at least possible, although there is no evidence in his own recollection, that he would occasionally examine, although he never milked, the cows of the Aboon-the-Brae herd. This broad distinction, however, remains, that none of the milkers in the Aboon-the-Brae farm were affected (excepting as after mentioned), while two of the four who regularly milked the Jaapston herd suffered as well as the farmer himself, who, as has been said, only occasionally did so. Further, and with reference to the above exception, it may especially be remarked, as having some as yet uncertain bearing on the possible specific and varied nature of these eruptions, that the girl who originally suffered while milking the lower herd was again affected under the following condition:—On the afternoon of Friday, 12th August, it was possible to separate from the combined herds several cattle, most of which had recovered, and one or two which probably had not been attacked at all, and this girl was one of those told off to attend to these alone. The milking of Friday morning (August 12th) was the last time she was in contact with the affected cattle, and while in church on the following Sunday she felt her left fore-arm becoming painful, and afterwards discovered that a spot was present thereon near the elbow. On the following Tuesday a second spot appeared on the right eyebrow, and when seen on the following day both sores were (evidently from the irritation of scratching) in a state of pustulation. The character of the sore which she had on her finger while in the lower byre at Whitsunday thus becomes doubtful, and, indeed, the girl states that she had suffered in a somewhat similar manner on previous occasions in other farms. The hands of the farmer presented, when we first saw him, two sores of a somewhat definite character. In front of the wrist there was a small circular spot of about the diameter of a split pea, having no inflammatory areola, but with sharply-defined edges and of a distinctly vesicular nature. The centre of the spot was blackening on the surface, apparently from desiccation, but there was nothing suggestive of depression or umbilication, The fluid contents increased, and on 12th August we obtained, by puncturing, some faintly straw-coloured lymph therefrom. Subsequently this sore healed by scabbing. On the inner aspect of the thumb posteriorly there was a second sore, larger in size and more irregularly shaped, but presenting some features corresponding with those already described. On the site of this sore, prior to inoculation, there had existed an abrasion of the skin, caused by friction, and its appearance was angry and erysipelatous-looking, differing only in degree apparently from one or two sores on the cows, which had manifestly arisen in the neighbourhood of a 'chapped' or 'fissured' teat. Two others of the Jaapston milkers had also suffered, but one had in consequence been compelled to stop work and go home, and the other, the farmer's wife, was then in attendance on her sick child. She attributed her sores to inoculation from the teats on the site of punctures and scratches received while picking fruit, in which occupation all the farm hands at Jaapston were more or less engaged at the time. In her case there were vesicles on several fingers of right hand, and the local inflammation during maturation was such as to compel her to keep her hand raised across her breast as much as possible.

"COLLECTION AND DISTRIBUTION OF THE MILK.

"The premises from which the distribution of the milk took place are among the most recently constructed of the kind in Glasgow, and are admirably suited for the purpose. The quantity of milk and cream received and delivered daily, between the middle of July and the time of the present enquiry, averaged 150 gallons, consisting of 75 gallons sweet milk, 61 gallons skim milk, and 13 gallons of cream. Of this daily quantity the amount received from the suspected farms represented 94 gallons (46 gallons sweet milk, 39 gallons skim milk, and 8½ gallons cream), the remaining 56 gallons being obtained from another farm. In both cases the milk was delivered at the purveyor's dairy by the farm carts, which were driven direct from the farms. In regard to the suspected milk, it will be remembered that it was the combined yield of two separate herds, collected in the following manner, and delivered to the purveyor, without distinction of source, as one supply:—The milk from the herd at Aboon-the-Brae was first driven to Jaapston, and the butts were then transferred to a Jaapston cart, and, along with those containing the portion of the milk there obtained, were driven by a man servant of that farm to the purveyor's premises, as already mentioned. The custom here followed was to allow each driver to empty his butts into the vessels of the purveyor on arrival, under this restriction that the cart first to arrive had the contents of its butts emptied and measured before any milk was discharged from the other cart, if it had by that time arrived. Further, the custom also was to empty all the butts and return them at once by the carts, although it occasionally happened that a butt would be left over unemptied at the time, from temporary want of a vessel into which its contents might be received. In particular, about the Fair holidays, when many customers were from home, it happened that on one morning six butts, containing the implicated milk, were thus retained, and although their contents were emptied during the day, the butts were not returned for a few days thereafter. This, though noted at the time, was not afterwards regarded as having any bearing on the enquiry.

"In endeavouring to follow the course of the milk through the purveyor's hands until it reached the houses of the consumers, advantage was taken of a division ascertained to exist in the purveyor's business, and which may be described as follows:—

"From the time of arrival of the milk in the morning—between 6 and 7—till about 10 o'clock a considerable quantity was delivered by carriers at the houses of customers, and there was also a considerable counter trade. After 10 o'clock the business was exclusively a counter one, and for the supply of this a quantity, usually amounting to 30 gallons in all, 14 gallons of sweet milk, a similar quantity of skim, and 2 gallons cream—was retained from the morning's delivery. Moreover, as the servant who took charge of this believed that what in time came to be the 'suspected milk' was richer in quality than that obtained from the other farm, she invariably put aside the quantity required for the day's counter sale from the former. The delivery of the milk at the houses of customers was accomplished by a band of messengers 23 in number. Two separate 'rakes' were necessary to overtake the work, regulated not by considerations of distance or locality, but entirely by the varying hours at which the customers wished their supply to reach them, and, for the following reason, it was here again possible to follow a second and somewhat larger stream of unmixed 'suspected' milk. The cart bringing this milk was invariably the first to arrive in the morning, and from this the quantity required for the first 'rake' was taken. Although the second cart might, and now and then did, reach the dairy before the messengers had started with their first 'rake' it was not allowed to unload its contents until they had gone, because of the difficulty which would thereby have been introduced of measuring accurately the amount which each cart brought. The quantity distributed in this first 'rake' amounted usually to something over 33 gallons—viz., 16 gallons each of sweet and skim milk, and 1½ gallons cream. Adding to this quantity the amount retained for the day counter trade, something like 63½ gallons are accounted for, and, it may be observed, in regard to the remaining 30½ gallons, that the proportion of sweet milk and cream contained therein is in excess of that originally present.*

"After the first 'rake' was despatched the milk from the second cart was added to the vessels required both for the second 'rake' and for the morning counter trade, and it is not possible to ascertain in what proportion either was present in one or the other. About 86 gallons in all would be thus disposed of. This amount is subject to a deduction of an average daily quantity of 5½ gallons, spread irregularly over 10 days, in the period between 26th July and 7th August, which was transferred to two other dairies under the same purveyor, in connection with which no case has been notified. *The milk thus transferred was invariably from the farm not implicated in the present investigation.*

"INCIDENCE OF THE DISEASE.

"Before further following these several streams of suspected milk, it may be well here to insert a note of the number of cases with which we were called upon to deal. 254 cases in all came under observation, representing 159 families. 134 were removed to hospital, and 120 were treated at home; 11 deaths occurred, 7 of which were of the cases treated at home, and 4 were of those removed to hospital. For departmental purposes an analysis of the cases known to exist as at 20th August last was prepared. These at that date were 236 in number, representing 152 families. Of the 18 additional cases which were reported in connection with this dairy between that date and 20th September, 11 were secondary to cases in households already attacked; 3 were in tenements where scarlet fever was present, or from which cases had been removed to hospital; 3 were cases sickening on 6th, 7th, and 9th August—mild in their onset, and consequently missed; and 1 has probably only an accidental connection with the outbreak under review. It is therefore possible to limit our view to the cases known to exist as at 20th August, because, with the exception of the 3 missed cases just mentioned, these include all who are directly related to the infected milk supply. As has been stated, there were at that date 236 cases under observation. From this number there may be deducted 4 cases occurring in July, and sickening on the 1st, 7th, and

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	Sweet.	Skim.	Cream.
* The quantities originally were, ...	46	39	8½
After deducting first 'rake' and day counter trade, there remained, ...	16	9	5

19th respectively. They are too far removed in time from the others to have their relationship to them properly defined. A further deduction may also be made of 8 cases sickening after 12th August, for the reason that 6 were in families already attacked, and 2 were in tenements where scarlet fever was being treated. 224 cases therefore remain, which sickened between the 1st and 12th of August, and were distributed over the several days of the period as follows[*]:—

		Nos. Reported.
August 1st,	1 sickened,	—
„ 2nd,	4 „	—
„ 3rd,	6 „	—
„ 4th,	16 „	1
„ 5th,	59 „	2
„ 6th,	66 „	7
„ 7th,[†]	41 „	Sunday.
„ 8th,	11 „	62
„ 9th,	6 „	77
„ 10th,	5 „	20
„ 11th,	8[‡] „	21
„ 12th,	1 „	9
„ 13th,	— „	10
„ 14th,	— „	Sunday.
„ 15th,	— „	7
„ 16th,	— „	7
„ 17th,	— „	4
„ 18th,	— „	—
„ 19th,	— „	1
„ 20th,	— „	4
	224	232

"The total number of cases reported from this district between 1st and 20th August was 305.

"It remains now to learn in what way the cases were distributed among the consumers.

"From lists supplied by the purveyor, and afterward verified or corrected by the inspectors, it has been ascertained that about 359 families were supplied with milk at their own houses. This is the number remaining, after deduction of a few families, at whom, from changed address or some similar reason, personal enquiry could not be made, and it is substantially accurate. Of this number, 94 families were attacked in one or more of their members; and, in regard to at least 12 other families, it may be remarked that some evidence of specific infection was present, in the form of a throat affection, which was unaccompanied, and in some cases not followed by, any other symptoms of the disease. These 94 families received their supply as shown in the accompanying table:—

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[*] A third parallel column is here introduced to show the progress of events as recorded by notification.

[†] The sale of milk was stopped on this date after about one-half of the usual daily quantity had been sold.

[‡] Including 3 in families already affected.

Source of Supply,	Families Supplied.	Families Attacked.	Individuals Attacked.
1st Rake, . . .	193	57	91
2nd „ . . .	166	37	59
Counter Trade, . .	not known.	58	86
	359	152	236*

* These figures include the July cases.

"It will be remembered that on a previous page notice was taken of a division of the implicated milk into three somewhat unequal quantities, and that, while the first rake and day counter trade were sold unmixed, the quantity distributed in the second rake and morning counter trade most probably was mixed, but the proportions present in this mixing could not be stated. This much, however, was known, that there was thus sold fully one-third of the original quantity of sweet milk, much less than one-third of the skim milk, and fully one-half of the cream. In the table just given, the families and individuals within these sections of the distribution are stated, and in relation to the proportionately smaller number of families of the second rake which suffered as compared with the first, it will be remembered that the milk distributed in the second rake was in some unknown proportion derived from an unsuspected source. It is to be observed, however, that the proportion borne by the families attacked to the individual cases occurring in both rakes, as ascertained, is in strict correspondence. Further, the family distribution of the cases was as follows:—

92	Families of 1 each,	. . . . . =	92
43	„ 2 „	. . . . . =	86
13	„ 3 „	. . . . . =	39
1	Family of 4 „	. . . . . =	4
3	Families of 5 „	. . . . . =	15
152			236*

* These figures include the July cases.

And by following the path of the rake distribution a concentration in particular streets was found to exist. In some streets few of the families supplied were attacked; in two or three streets no cases occurred, although the milk was being consumed by several families residing in them; while in one street 21 families—more than half those supplied—yielded 29 cases. These considerations, together with the fact that only 94 were attacked of the 359 families supplied in both rakes, suggest that the active principle of contagion present was not uniformly distributed throughout the infected milk.

"In following thus far the incidence of the present epidemic, the endeavour has been to produce a series of impressions which might suggest relationships existing between events co-related in time, but coming to our knowledge in such a way as to render it impossible to deal with them in the order of their occurrence. Reference was made at an early part of the report to an opinion hurriedly formed, from the facts within our knowledge on the morning of 8th August, that the cases in Glasgow and that at the farm had one common origin in infected milk. It therefore remained for us to ascertain how far this would be confirmed or corrected by further enquiry. The children carrying milk from the dairy to the houses of consumers were 23 in number, and 7 were connected with households (5 in number) in which scarlet fever appeared. Four of the carriers were themselves attacked, and 3 were implicated only through illness in other members of their households. Arranging the 5 families of carriers according to the date of sickening, we found as follows:—

Family S,	Sickened 3rd August,	2 carriers,	1 ill.
„ C,	„ 5th „	1 „	Well.
„ R,	„ 5th „	1 „	Well.
„ B,	„ 6th „	2 „	Both ill.
„ D,	„ 7th „	1 „	1 ill.

As has been shown, by the 5th of August the epidemic was well on its way, so that interest in the above table chiefly centres in the family S, and the area of milk distribution supplied by the members of it who were carriers.

"Between 1st and 3rd August, 10 families, residing in Crookston Street, Bedford Street, Cathcart Street, Ardgowan Street, Parker Street, and Clarence Street, were invaded, while milk was delivered in only one of these streets (Clarence Street) by the carriers of family S.

"Further, Crookston Street and Cathcart Street supplied

32 and 38 cases respectively of the total number—figures both much in excess of those contributed by any other street, and in neither of these streets was the delivery of milk conducted by any of the families of carriers attacked.

"The shop assistants, 3 in number, did not suffer in themselves or their families, and recalling what on a former page was said regarding the dairy premises, there remains not the slightest moiety of evidence which would suggest contamination of the milk after its delivery in town.

"While in transit between this and the farm from which it came, the milk was in charge of a farm servant, and we found no reason for impugning the manner in which he had conducted his work, or for doubting his assertion that the milk left his hands as it was given to him. Indeed, the coincidence of disease at both ends of the milk stream—at the farm and in town—simplified the enquiry in this direction, for the milk used at the farm was not at any time under his charge, and the sickness there only occurred when 27, if not 31, of the town customers were already ill. The farm hands were, except as formerly stated, healthy.

"RE-DELIVERY OF MILK FOLLOWED BY FURTHER CASES.

"The whole herd had at the date of our first visit been placed under the charge of Principal M'Call, of the Veterinary College. On 12th August arrangements were made for separating from the rest of the herd as many of the cattle as seemed to have recovered from the local affection of the udders and teats, and on 23rd August the milk from such as were thus regarded as having recovered was sent to a dairy in Glasgow, in a locality quite apart from that previously referred to. This milk was sold under direction that it was not to be mixed with the produce of any other byre, and the following succession of cases then occurred among the consumers:—

August	25th, .	1	Sickened.	August	31st, .	2	Sickened.
,,	26th, .	3	,,	Sept.	4th, .	1	,,
,,	28th, .	3	,,	,,	6th, .	2	,,
,,	29th, .	2	,,	,,	8th, .	3	,,
,,	30th, .	2	,,				

"On 30th August the milk was again stopped, and none was sold after that date, the cases sickening thereafter having used the milk during the period from 23rd to 30th August.

"CONCLUSION—WITH REMARKS ON THE PROBABLY SPECIFIC NATURE OF CERTAIN FORMS OF TEAT ERUPTIONS KNOWN AS SPURIOUS COW-POX.

"From the sores existing on the cattle, as previously described, we removed, during our first and one or two subsequent visits, the adhering crusts, and collected some of the lymph exuding from the underlying sores. These were sent to Dr. Klein, whose report thereon is attached. We could not learn how long the individual animals from which these were collected had been ill, but in regard to the material numbered (1) and (4) in Dr. Klein's report, this was obtained from an animal of the Jaapston byre.

"In Dr. Klein's report it will be seen that an organism was present with properties similar to that obtained in the Hendon outbreak, and sores produced by inoculation of the material presented the character of those in the Camberwell outbreak. In addition the virus of vaccinia was present. This leads us to remark that one of the earlier difficulties which we met with in this investigation arose from the prevailing disposition to regard every form of teat eruption as being either true cow-pox or spurious; and this with little regard to the presence of characters which might serve to distinguish between members of the spurious class. And there is this to be said in explanation, that the milker only as a rule has his attention directed to the teats when the animal becomes restive in milking, and when friction and manipulation have produced a similarity in the appearances of all sores existing in the region without distinction of cause. The unrecognised existence of true cow-pox in the byres is an illustration of this.

"As a contrast to the condition of the cattle described in connection both with the Hendon and Camberwell outbreaks, these Jaapston cattle presented no desquamating condition of the skin, and no other evidence of a constitutional affection, and we have the testimony of Principal M'Call, already quoted, in support of the healthy appearance of the cattle apart from the local sores. Consequently, the reappearance of scarlet fever following the delivery between 23rd and 30th August is a question of some moment.

"It has been said that the crusts which formed on the local sores could be without much difficulty removed; but, under such circumstances, they readily formed again, and this alternating separation and reformation could be repeated as long as any ulcerating surface remained under the superjacent crust. When this process in a given animal had been repeated several times, there was a disposition to regard the crusts, which were thus many removes from the primary one, as having nothing of a specific nature about them; but the limited outbreak after 23rd August is possibly an indication that this view is erroneous.

"The cattle affection being so entirely a local one in this instance, it would seem a straining of terms to apply to it the name bovine scarlatina; but the existence of a local eruption on the cow standing related, as this does, to scarlatina in man, at once suggests the parallelism which is on every hand accorded to vaccinia and small-pox."

REPORT BY DR. KLEIN.

"ST. BARTHOLOMEW'S HOSPITAL,
"LONDON, *5th November*, 1892.

"DR. RUSSELL,

"Sir,—I beg herewith to report on the results of the observations that I made with the materials sent to me by Drs. Munro and Chalmers. The materials, as described in letters by yourself, Dr. Chalmers, and Dr. Munro, were sent to me through Dr. Thorne Thorne, the Medical Officer of the Local Government Board, and were of the following nature:—

"(1) Lymph in tubes taken from the eruption of a cow in Renfrewshire on 9th August.

"(2) Lymph in tubes (marked A) from an unruptured vesicle on the wrist of a milker, sent 13th August.

"(3) Lymph in tube (marked B) taken from a subcutaneous vesicle on the teat (unruptured) of cow No. III, also sent 13th August. (This lymph could not be used for experiment; it was quite clogged, and could not be got out from the tube.)

"(4) Scabs from teats of cow taken 14th August. This was the same cow from which lymph was taken on 9th August. (See No. 1.)

"A—*Experiments with lymph taken on 9th August.*

"This lymph was used for two sets of experiments:—

"1. With a trace of this lymph, cultivations in gelatine plates and in agar plates were made. As a result of these, the following micro-organisms were isolated:—(*a*) A few colonies of staphylococcus aureus liquescens; (*b*) a few colonies of staphylococcus albus liquescens; (*c*) very numerous colonies of moulds; (*d*) numerous colonies of streptocococcus. These last were further examined by subcultures in gelatine (streak and stab cultures) on agar and in milk. As is well known, the various species of streptococci are practically indistinguishable in gelatine plate cultures, and in stab and streak cultures; but the streptococcus, isolated above, belonged to the group of streptococci which I have designated as forming opaque growths, *e.g.*, streptococcus pyogenes, streptococcus scarlatinæ, and streptococcus of the Edinburgh disease; that is to say, the colonies on the surface of the gelatine, the growth in streak and stab cultures in the gelatine, when looked at in reflected light appear white, when looked at in transmitted light appear somewhat opaque; but in the mode and rapidity of growth, in their non-liquefaction of the gelatine, and in their microscopic characters, all these streptococci appear practically indistinguishable, presenting appearances of about the same kind. I have, however, insisted in my report to the Medical Officer of the Local Government Board for 1885-86, and in further reports, that the streptococcus, which I isolated from the ulcers on the teats of cows in the Hendon outbreak, which, it will be remembered, was associated with an extensive outbreak of scarlet fever in the north of London, as also from the blood of cases of human scarlatina, had the special character of markedly coagulating milk when growing in this at 37° C.

"The streptococcus which was isolated from the lymph sent from the Renfrewshire cow in the present enquiry had this power of coagulating milk in a very conspicuous degree.

"Sterile milk, contained in tubes, was inoculated from a pure subculture of the above streptococcus—that is, the one obtained in the present inquiry—the tubes were then placed into the incubator and kept at 37° C. After thirty hours incubation the milk had completely solidified; after two days there was a complete separation of a very slightly turbid serum from a solid clot. Both the serum and the clot were tested by cultivation, and were found to contain a pure culture of the streptococcus. Milk in tubes, inoculated from these subcultures, or from the above clotted milk, turned solid in thirty hours.

"Comparative experiments of milk cultivations were made with fresh cultures of the streptococcus pyogenes, and of the active streptococcus erysipelatis, which at the time I happened to possess, but neither of them produced the change of clotting in the milk.

"With recent broth cultures of the Renfrewshire streptococcus, tame white mice, as also wild house mice, were inoculated subcutaneously. The result was this:—Out of four white mice thus inoculated, one was found distinctly ill on the second and third day. It was quiet, did not feed, its hair erect, its back curved; but it had completely recovered by the fifth day. The other three mice remained apparently quite unaltered after the inoculation, but one of them became thin after a week, and died after twenty days. With the same broth culture of the streptococcus four grey house mice were inoculated. On the second day after inoculation they were all found affected—quiet, did not feed, back curved, eyes sunk. One of them gradually recovered by the end of the week, while the other three remained abnormal more or less till death. One died on the fifth, one on the eighth, and one on the morning of the ninth day. The *post-mortem* appearances were these:—The seat of inoculation showed no change; the spleen was enlarged and congested; the small intestine distended, relaxed, and filled with sanguineous mucus; the lungs, liver, and kidney congested; small amount of sanguineous exudation in the pleura and pericardium. From the spleen tissue the streptococci were recovered by cultivation.

"From this it is seen that with the cultivations of the Renfrewshire streptococcus the same results were obtained by inoculation of tame and wild mice as was the case with the cultivations of the streptococcus isolated from the ulcers of the Hendon cows in 1886. (Report of the Medical Officer of the Local Government Board, 1886-87.)

"Both acted virulently on the wild house mice, and only slightly on the tame white mice.

"2. The second set of experiments with the lymph (1) sent from the Renfrewshire cows consisted in introducing the lymph into linear cutaneous incisions of two calves.

"Both these calves had a few weeks previously passed through typical vaccinia, and had at the time of the present inoculation (12th August) thirty to thirty-six characteristic vaccinal cicatrices; on 12th August, six insertions were made into linear cutaneous incisions, each about ½ to 1 inch long, on the abdomen of each animal, and lymph rubbed into them.

"On inspection on 15th August, one calf had completely failed, the other showed the insertion tumid, surrounded by redness, the incision itself pustular—*i. e.*, a narrow vesicle filled with purulent matter.

"On inspection of this calf on 17th August, all the pustules were transformed into brown scabs; these became loose on 18th August, and gradually crumbled away, leaving an indistinct healed linear scar behind.

" B.—*Experiments with Lymph marked A, sent 13th August.*

" This lymph was derived from a vesicle on the wrist of a milker.

" Calf No. 1 was inoculated in five linear cutaneous incisions on the scrotum and in two of the groin. Failed completely.

" C.—*Experiments with Scabs taken on 14th August from Renfrewshire cow.*

" The scabs were rubbed up, on 9th September, in sterile salt solution, and with this inoculations were made in thirty cutaneous incisions in groin and on belly of calf II.

" On 12th September, the first signs appeared that the inoculation had taken—all incisions being raised and surrounded by a distinct red areola, the line of incision being marked as a thin scab.

" On 15th September, the redness and swelling more pronounced, the central linear scab broader than before. Five of these insertions showed at a spot either at one end or in the middle of the original incision a round vesicle, much resembling a vaccine vesicle—viz., much raised, pale and vesicular in the peripheral part, a central depression with dark scab, red areola surrounding the pock. On clamping the pock with vaccine forceps a considerable amount of clear lymph oozes out of the pock. The other twenty-five insertions developed no vesicle during the subsequent days.

" On 19th September, all insertions were covered with broad brown crusts, very little redness around them. With lymph squeezed out of the five vaccine-like pox on 15th September, inoculated calf I (that is, the calf that had failed after inoculation with lymph A from the vesicle on the wrist of a milker), and a fresh calf, No. III. Calf I received the lymph in twenty incisions (eight on scrotum); calf III in thirty-six incisions.

" The result of this inoculation was the development of what, in aspect and course, resembled vaccinia. Charged points with scrapings of vesicles of calf I, they being then on the sixth day, and with these points inoculated one calf, V, in twelve linear cutaneous incisions. The result was the development of what, in appearance and course, looked like typical vaccinia.

" It was stated above that in calf II, only five out of thirty insertions did develop partially—*i. e.*, at one point into raised, round vesicles, with central depressed crust. The main part of these five insertions and the other twenty-five passed a totally different course—a course which differed in this important respect that at no time was there an umbilicated vesicle formed, but the insertion was slightly raised, and red on the fourth day. This increased in the subsequent days, while in the line of the incision a crust, at first narrow, and then gradually thickening and broadening, appeared. On the ninth, tenth, and further days, this crust was as broad as the original areola, and remained firmly adherent, while becoming of considerable thickness. Only after about a fortnight did it begin to show transverse fissures and to become loose; but, when before this date it was forcibly removed, a sore was exposed, and in twenty-four hours a new crust was formed on this. The falling off of the crusts and the healing of the sore was not completed till about three weeks after the inoculation. The whole course of the eruption reminded me of, and was, in fact, very similar to, the eruption produced on calves in the Camberwell Scarlatina outbreak, with a crust from the sore on the teat of a cow, and described and figured in my report to the Medical Officer of the Local Government Board for 1888-89, p. 377, and following.

"This became more firmly established by the following experiment:—

"As mentioned above, calf II had twenty-five insertions, which followed a course different from the other five; several of the former non-vesicular eruptions were scraped on the seventh day, and with the scrapings one calf, No. IV, was inoculated in thirty-one cutaneous incisions. These scrapings were therefore of the same age as the lymph obtained from the five vesicles of same calf II—*i. e.*, the seventh day.

"Now, in this calf IV, all thirty-one insertions took well; on the fourth day all insertions were raised and surrounded by areola, the original incision occupied by a thin narrow scab. This condition increased during the fifth, sixth, and seventh days, by which time the scab broadened and thickened; the redness then subsided, while the scab proceeded to thicken and to become broader; by the ninth and tenth day it was as broad as the original areola; when taken off forcibly, a raw, bleeding ulcer was exposed; next day this was found again covered with brown scab. The scabs did not become loose till about the eighteenth day, and by the end of the third week most of them had fallen off, partially or wholly, leaving a dry reddish raised cicatrix behind, which, however, for some days remained covered with a sort of imperfect scab. At no time was there a vesicle present. From this calf IV scrapings were taken on the seventh day, and inoculated in sixteen linear cutaneous incisions in calf VI. Also here the result was exactly the same as in calf IV, a result identical with that obtained in 1888 in the Camberwell inquiry (*l.c.*, pp. 378, 379).

"From these experiments it follows, then, that in calf II, inoculated with the crusts of a Renfrewshire cow, two kinds of eruptions were produced:—(*a*) in five out of thirty insertions vesicles appeared which, in aspect and course, resembled vaccinia; and (*b*) twenty-five insertions did not develop anything like vaccinia, but, from the fourth day after inoculation, became raised and possessed of an areola, and covered with a gradually broadening and thickening brown crust, without the intermediate stage of an umbilicated vesicle. By transferring the lymph from the vaccinia-like pox (*a*) to calves I and III, and from calf I to calf V again, vaccinia-like pox were produced, and by transferring matter from the non-vesicular eruptions (*b*) on to calf IV, and from this again to calf VI, the same non-vesicular type was reproduced; so that we are justified in saying that though in calf II the two viruses were present, one in one set (5) and the other in the other set (25) of the insertions, by further separate transference to calf I and III in the one case, and to calf IV in the other, the two viruses became differentiated, and this differentiation became finally well established in the third generation—viz., the one virus in calf V, the other in calf VI. It will, I think, hardly be contended that the twenty-five eruptions in calf II, and all the eruptions in calves IV and VI, were perhaps only modified, mitigated, or abortive vaccinia, for it is in the highest degree improbable that the virus, if abortive vaccinia, should 'breed true' in two successive generations of calves, and should cause so typical and severe an eruption as was the case in calves IV and VI. I have already, in 1888-89, shown that the eruption in the Camberwell inquiry did not protect the calves against vaccinia, and it is impossible to assume that calves which have passed through such a severe eruption as was produced in the Camberwell inquiry, assuming this to be some kind of vaccinia, should be susceptible to subsequent vaccinia, taking a perfectly normal course.

"As in 1888-89, so also in the present inquiry, I have subjected calves IV and VI to vaccination with lymph, on points obtained from the Government Animal Vaccine Establishment, and found them fully susceptible to it. Both calves were vaccinated about two weeks after the results of the previous eruption had passed off (though on eight of the original insertions there were still traces of loose scabs), each in twelve insertions. *Every one of these insertions developed into a typical vaccine vesicle.* When inspected on the fifth, sixth, and seventh day, the appearances were those of typical vaccine vesicles in a normal unprotected calf.

"But altogether different from this was the result produced in calves III and V, which at the same time as the above calves IV and VI were subjected to vaccination with the vaccine matter obtained from the Government Animal Vaccine Establishment; for every one of the eight insertions in calves III and V had by the fourth and fifth day completely failed, no redness, no swelling, no vesicle, all the incisions were dry and pale, and only the place of the linear incision could be recognised.—Your obedient Servant,

"E. KLEIN."

LOCH LONG SHARKS (PORBEAGLE, LAMNA CORNUBICA OF CUVIER).*

By JAMES DUNLOP, M.D.,
Professor of Surgery, Anderson's College, Glasgow.

THROUGH the kindness of Mr. Brown, fishmonger, Kelvinside, and Mr. Colquhoun, fishmonger, Hamilton, having had an opportunity of dissecting two sharks, which had been caught in a net in Loch Long, off Ardentinny, in the Frith of Clyde, about the 9th or 10th October, 1892, it has been suggested that it might be interesting to some of the members of the Natural History Society were I telling them something of the history and habits of these sharks and of their anatomical structure.

History and Habits.—The two sharks were captured in a Hake net, and in 30 to 40 fathoms water. They were dead when the net was drawn. The female fish, which seemed to have died hard, had excoriations about the gill openings, probably produced in its violent efforts to free its head from the large meshes of the strong entangling net. The two sharks were fine specimens of the Lamna Cornubica of Cuvier, the Porbeagle shark, also named the Beaumaris shark. This latter name had been given to a shark which had been caught in a net in Carnarvon Bay about the year 1837. It was thought by the naturalists who had seen and examined it to be a distinct species of the smooth-skinned lamna, but Yarell, after comparing it with other specimens of the Porbeagle, came to the conclusion that the Carnarvon Bay shark and the Porbeagle were the same.

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* Read before the Natural History Society, 29th November, 1892.

This species of shark is said to be a wanderer. Its headquarters or home is said to be the Bay of Gasgony, the coast of Spain, and the Mediterranean. A large one, somewhat injured, possibly in a fight, was found cast ashore near Jaffa—the Joppa of the prophet Jonah. The natives of Southern Italy, especially the Neapolitans, use the flesh of this and other species of sharks as food.

The Porbeagle has been recognised for many years as a visitor to our southern coasts, such as the coast of Hastings, Brighton, and Cornwall. It has been found also on the east coast, in the Frith of Forth, and as far north as Caithness. Mr. Anderson Smith, of Ledaig, tells me that one was taken off Glen Sannox in 1879, and since then two were captured off Blairmore. In 1890 one was caught in Loch Fyne, and that one I dissected.

Mr. Thomas Muir, a very intelligent fisherman at Ardentinny, in whose Hake net the two Loch Long sharks were caught, says that during the last fifteen years this species of shark is a frequent visitor to the waters of Loch Long, seldom a winter passing without one or more being caught in the Hake net. In one season five were captured. Although they appear to come to the Frith of Clyde, apparently following the shoals of herrings, they seem to frequent the deep waters of Loch Long, not only in the autumn, but in the early months of the year, and that, too, at a time when there were no herrings in the Loch; and the food of the sharks, according to Mr. Muir, seemed to be ground fish, such as dogfish and hakes.

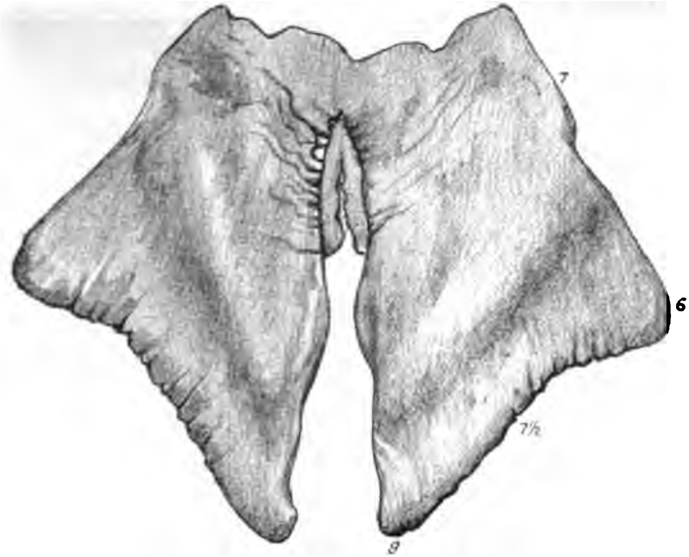
It has, however, been noted by some captains in the Atlantic Ocean service that in recent years, not only in the Atlantic, but in the Irish Channel nearer home, many large fish of the shark family—some of them of great size—have been seen in the wake of cattle carriers, apparently on the look out for the carcases of bullocks and horses washed or thrown overboard, the abundance of that kind of food attracting them to our shores.

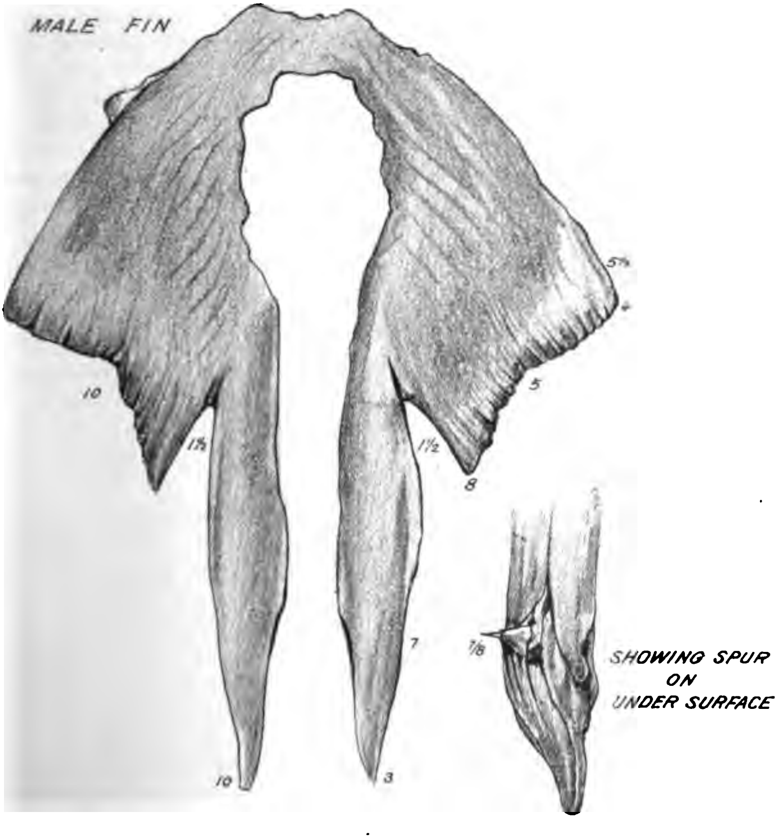
So far as has yet been known, the Porbeagle shark, although its appearance and glare of eye are against it, is innocent of the crime of attacking bathers. I would not put much trust, however, in its teeth were it compelled to act in self-defence. Dogfish, more especially the picked species, do their very best to inflict injury upon the hands of their captors by means of the spines upon the dorsal fins; and even the rough hounds, without spines, but with sandpaper-like skins, coil themselves round the bare arms of their captors, hoping, by rubbing their rough skins against tender surfaces, to inflict injury and thereby escape.

The Porbeagle shark seems to hunt for food in small packs, three or four in a pack—possibly the parents accompanied by their young, which may not amount to more than two. In the summer of 1889, a young shark of this species, nearly 3 feet in length, was caught in a net off Carradale. It had been accompanied by two large sharks which had escaped by tearing the nets. It appeared to have been about three to four months old. It had two rows of small teeth. If its age was correctly guessed, it would make the Porbeagle shark bring forth its young in May or June. According to Pennant, the female fish gives birth to two young ones annually. As the uterus now shown is two-horned, there is quite space in each division for a young shark. It is not yet known whether there is an umbilical placenta attachment to the interior of the uterus as is found in the mustelus lævis—an anatomical fact which was known to Aristotle. It is figured in Claus' *Text-book of Zoology*, p. 160 of Sedgwick's translation.

The two sharks, which we now call the Loch Long sharks, were male and female. The latter was larger than the former by fully 12 to 15 inches. The female measured from point of snout to the tail about 8 ft. 10 in. Its circumference was about 4 ft. 10 in. Its dorsal fin was 17 inches in height, the upper lobe of tail 25 inches, the lower 17 inches. The colour was black on the back and fins, lighter on the sides, and white below. The skin was a little rough when rubbed against the grain. The sex was clearly and very readily made out by the distinctive characters of the anal or pelvic fin. There is shown a drawing life size, also the preparations themselves. The anal fin of the female is square shaped and without any appendages. From a point above, which may be termed the *mons veneris*, to the lower edge of the double fin, the length is nearly 10 inches, the lower border is 7½ inches in breadth. On the inner side of the two equal divisions of the anal fin there is felt to be, at a point about 2 inches above the margin, a slight bony prominence, which has a distinct relation to a jointed spine, which is in each clasper fin in the male.

The anal fin in the male is much smaller than that of the female, but at a point where the fin proper terminates there is a strong bony appendage with a joint admitting considerable lateral motion. This appendage, which may be described as an accessory copulative organ, is fully 10 in. in length, and about 4½ inches in circumference at its rounded part. One side is




MALE FIN
5½
4
10
5
1½
1½
8
7/8
SHOWING SPUR ON UNDER SURFACE
7
10
3

PELVIC FINS OF LAMNA CORNUBICA PORBEAGLE SHARK

entirely smooth down to its tapering point, but on its other surface are grooves and spaces which are more marked towards the joint than at the base. About 2½ to 3 inches from the tip there is a joint of an ordinary hinge character, and when the joint is somewhat flexed there is projected from within a fold, a spinous process sharp in the point which lies horizontal to the line of the clasper appendage. It is there represented in the diagram, and it is seen in the wet preparation. Its function evidently is for clasping purposes.

The snout of the Porbeagle shark resembles that of the hog—hence the name by which it is sometimes known, the "Hog hound." It follows its prey by sense of smell as well as by sight. Its olfactory nerves are very highly developed, and all over the snout, and even beyond the eyes, are numerous little openings, from which a reddish gelatinous fluid was expressed. The eye is a very striking organ of vision. It has the power of projecting it outwards, "begoggling," as it is termed, beyond the line of the orbit, thus increasing its range of vision. There is a distinct and somewhat broad rim of bone in the sclerotic coat, to which powerful muscles are attached. This rim of bone seems to serve also as a protecting shutter against obstacles, when the fish is running at a great speed.

By some naturalists the Porbeagle is said to have no spiracles. A small wire was passed into a minute opening lying in a fold, and easily overlooked, between the eye and the first branchial slit, and along a tortuous sinus till it was found, on dissection, to enter a pharangeal pouch.

Both male and female specimens had spiracles.

Teeth.—The teeth are in three rows, and are set in a membranous structure. They are readily moved with the mucous membrane. They were all sharp-pointed, with the points looking backwards. They are evidently for seizing the prey, which seems to be bolted whole. It is said that as the outer row, which contains the largest teeth, get worn or broken, their place is taken up by the inner set. It is thought by some observers that each row marks a year of life. The young specimen already referred to, which was probably only a few months old, had two rows of teeth.

Of the internal organs of the shark not much need be said, as Claus, in his *Text-book of Zoology*, enters into very minute and interesting details regarding them. There are shown here the internal organs of both male and female.

The heart is a powerful muscular organ, and consists of one auricle and one ventricle. As it lies in the thorax, it can be readily reached by a long bladed knife entered at a point a little below the line which joins the two posterior branchial slits.

Sharks are very tenacious of life, although they, like their smaller brethren, the dog-fish, are readily stunned by a blow on the snout, yet they can bear with apparent impunity stabs and cuts in various parts of the body; but a stab, to be effective, and immediately fatal, must reach the heart.

Abdominal Cavity.—The small space occupied by the abdominal organs, the spiral valve arrangement for the intestines, which especially increases the area of absorption, the great muscular development, the crossing and recrossing of muscular fibres and tendons, the general configuration of the fish, its powerful tail and large fins, all bear evidence of design, and contribute to great speed and power. Hence it is that sharks are enabled, with apparently the greatest ease, to keep up for days and nights in succession with a fast-going Peninsular and Oriental steamer.

The stomach of the male shark contained a considerable quantity of bones of large fish like hakes and haddocks, but no herrings and no crustacia, while that of the female was quite empty. Probably in dying in the net, it emptied the contents of its stomach. Fish often, when brought into the boat, do so. The stomach of a Porbeagle, captured on the East Coast, contained a tin canister full of coins, and it is stated that both in the Mediterranean and Indian Seas, the patent revolving brass log used in ships for measuring the distance ran, is sometimes swallowed by a shark.

Off Ardentinny, in Loch Long, the fishermen, Mr. Muir tells me, in drawing the Hake net, after killing the dog-fish which were entangled in the meshes, were accustomed to throw them overboard into deep water. They came to find that the Porbeagles, which seemed to be in waiting, obtained their food too easily, and they altered their practice. The fishermen frequently found dog-fish in the stomach of the Porbeagle shark.

Between the stomach and intestinal bag is a small straight tube, along which only fluid food can pass. At the lower orifice of the stomach is a valve—the pyloric valve—which prevents large objects, as bones of any size, passing through. In the intestinal bag, which terminates in the rectum and vent, there is a most wonderful structure. In the interior are folds of membrane, the valvulæ conniventes arranged in a very close spiral, like a long winding stair, and the purpose is to afford the largest absorbing area in the smallest possible space. The whole intestinal canal, from the gullet downwards to the vent, only occupies a few feet relatively to the size of the entire body. The same spiral arrangement obtains throughout almost the entire shark family. They are built after the same model—great locomotive power with small carrying space. The liver was the largest organ in the body. The oil from the liver is said to be a specific for the cure of chronic rheumatic joints.

The uterus or womb is double horned. The ovary seems to be large and single, joining the two divisions above, but below the horns, again unite and open by one mouth in the vaginal space. It was empty. There is an idea among some fishermen in the Frith of Clyde that the Porbeagle shark breeds in Loch Long, apparently not finding the Glasgow sewage objectionable. If so, there is some hope that in February or March a pregnant female fish may be captured for our inspection.

In connection with this subject, it may be mentioned that during last summer dog-fish, which are included in the family of sharks, were very abundant in the Sound of Kilbrannan, as many as 147 having been captured in one haul of the long line, the hooks having been baited with herring.

There are six distinct species of dog-fish found in the Frith of Clyde. Of these, four are native and abundant, the other two are probably visitors. They are not therefore numerous, and only occasionally found. There is this peculiarity about the six species, that while the process of procreation is probably the same in all, yet the ova and young are treated differently. Three of these—the small spotted dog-fish, the *Squalus canicula* (L.), the large spotted dog-fish, *Squalus catulus,* both native, and the black-mouthed dog-fish, *Prestiurus Melanostomus,* a visitor from the coast of Naples, where it abounds, deposit their eggs in seaweed, making something like nests, to which their eggs, encapsuled in a horny case, are attached by tendrils, while the smooth hound or skate-toothed dog-fish, the *Squalus mustelus,* which feeds on crabs, the picked dog-fish, *Squalus acanthias,* with the spines on its dorsal fins, both native, and the toper, *Squalus galens,* probably a visitor, bring forth their young alive, their ova having been brought to maturity after being more or less intimately connected with maternal surfaces within the body of the female parent.

Through the kindness of Mr. Anderson Smith, of the Fishery Board, specimens of the eggs and young of these dog-fish may be seen in the Kelvingrove Museum in Glasgow, and also a large Porbeagle sent by Mr. Muir of Ardentinny.

ANALYSIS OF A THOUSAND CONSECUTIVE CASES OF SKIN DISEASE MET WITH IN PRIVATE PRACTICE, INCLUDING THE SEX AND AGE OF THE PATIENTS.

Extracted from PROFESSOR M'CALL ANDERSON'S *Notebooks by* DR. HERMAN F. LAWRENCE, *of Melbourne.*

A. FUNCTIONAL AFFECTIONS.

	Sex.		Total.	Age.	
	M.	F.		Range.	Average.
Pruritus,	21	8	29	25-84	44
Seborrhœa,	8	3	11	3 m.-46	21
Comedones,	6	8	14	4-25	19
Dysidrosis,	2	1	3	25-47	38
Vitiligo,	2	1	3	19-49	30
Ephelis,	1	4	5	26-46	35
Alopecia,	10	5	15	8-70	29
Do. areata,	28	21	49	3-48	23
Hirsuties,	...	8	8	25-45	31
Fragilitas crinium,	2	...	2	24-28	26
Trichorexis nodosa,	...	1	1	2	...

B. ORGANIC AFFECTIONS.

I. INFLAMMATIONS.

	Sex.		Total.	Age.	
	M.	F.		Range.	Average.
Erythema (including roseola and pityriasis)	30	33	63	2-70	31
Do. multiforme,	1	...	1	26	...
Do. nodosum,	...	1	1	22	...
Do. pernio,	1	3	4	14-39	29
Pityriasis rubra,	...	1	1	60	...
Lichen planus,	4	1	5	30-70	47
Urticaria,	6	7	13	4-65	39
Zona,	5	...	5	25-84	55
Dermatitis herpetiformis,	2	3	5	6-68	20
Do. medicamentosa (iodide rash),	1	...	1	29	...
Erysipelas,	5	3	8	40-58	45
Eczema,	184	109	293	4 m.-93	33
Impetigo contagiosa,	1	...	1	39	...
Acne vulgaris,	22	46	68	4-50	23
Rosacea,	8	23	31	20-67	37
Ecthyma,	...	1	1	not given	...
Psoriasis,	64	54	118	2-70	31
Furunculus,	9	2	11	14-60	32
Anthrax (carbuncle),	5	...	5	40-70	53
Ulcers,	5	5	10	8-64	31

B. ORGANIC AFFECTIONS (*continued*).

II. New Formations.

	Sex.		Total.	Age.	
	M.	F.		Range.	Average.
Ichthyosis (congenital),	...	1	1	33	...
Nævus spilus,	...	1	1	2	...
Do. vascularis,	2	5	7	7-60	28
Verruca,	4	2	6	40-65	51
Molluscum fibrosum,	...	1	1	46	...
Elephantiasis Græcorum,	1	...	1	33	...
Tylosis linguæ,	3	...	3	30-53	44
Paget's disease of the nipple,	...	1	1	45	...
Epithelioma,	5	5	10	25-71	47
Varix (uncomplicated),	11	2	13	20-70	48
III. Hæmorrhages.					
Purpura simplex,	...	2	2	21-44	32
IV. Diseases Produced by Uniform Causes.					
1. Parasitic Affections.					
Vegetable, Tinea favosa,	...	...	...	...	...
Vegetable, Tinea tricophytina, circinata,	...	3	3	6-17	12
Vegetable, Tinea tricophytina, tonsurans,	20	13	33	2-57	9
Vegetable, Tinea tricophytina, sycosis,	5	...	5	25-42	33
Vegetable, Tinea versicolor,	3	1	4	20-28	25
Animal, Scabies,	21	7	28	3-45	15
Animal, Phtheiriarsis,	1	1	2	9-33	21
2. Syphilitic Affections.					
Secondary and tertiary accidents,	43	3	46	18-60	35
3. Strumous Affections.					
Lupus, vulgaris,	5	14	19	5-58	26
Lupus, erythematodes,	...	11	11	18-54	37
Scrofuloderma,	3	1	4	7-19	13
Strumous glands,	3	3	6	2-50	22
Do. ulcers,	2	3	5	5-43	20
Do. abscesses,	...	2	2	27-35	31
4. Eruptive Fevers.					
Varicella,	1	...	1	4	...

A CASE IN WHICH A PORTION OF A NUT WAS IMPACTED IN THE RIGHT BRONCHUS AND REMOVED BY OPERATION.*

By J. WALKER DOWNIE, M.B., F.F.P.S. G.,
Surgeon, Throat and Nose Department, Western Infirmary.

Towards the end of last session Dr. Hector Cameron made an interesting communication to this Society on "Foreign Bodies in the Air-Passages." As that paper aroused considerable interest in the subject, I thought it would not be out of place to here give a brief description of a case which occurred last week.

The patient was a boy, 7 years of age, who, while chewing a Brazil nut, laughed at his companion who had begun to eat a decayed one, and, while so laughing, he accidentally inhaled a portion of the nut in his mouth. Dyspnœa at once supervened, but after a few seconds he was able to run to his father's shop, a distance of some 300 yards. There he told his father that a piece of a nut had stuck in his throat, and, as he appeared to breathe with difficulty, his father administered an emetic in the form of a bottle of soda. After vomiting he breathed more freely, was taken home, and put to bed. This was on Monday, 24th November. During the evening and throughout the night he had frequent attacks of cough, accompanied by very slight difficulty in breathing. On the following day he complained of pain in the region between the lower angle of the right scapula and the vertebral column. For this he was poulticed by his mother, but as no relief followed the hot applications, and as the cough persisted, he was taken to a doctor. Apparently he looked upon the condition as catarrhal, and prescribed accordingly. On Thursday, the 24th, Dr. James A. Adams was called. He found the patient flushed, with a temperature of 104·2° F., breathing rapidly, and with a persistent hard cough. On viewing the chest, it was seen that, while the left side expanded freely on inspiration, no movement could be detected over the right side. On auscultation, air was heard to enter the left lung freely, but it was thought that none whatever entered the right lung, as over it there was complete absence of the respiratory murmur and of vocal fremitis. At the request of Dr. Adams, I saw the patient late the same evening, when, in addition to the above physical signs, there was an area of dulness on percussion over the base of the right lung, and there was slight fœtor of the breath. There was no doubt of the blockage of the right bronchus, and there was possibly suppuration around the foreign body, so I strongly advised early operation, consent to which was very reluctantly given.

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* Read at a meeting of the Surgical Section of the Glasgow Medico-Chirurgical Society, 2nd December, 1892.

On the following morning about nine, the patient, having been put under the influence of chloroform by Dr. A. N. M'Gregor, I cut down upon the trachea. The patient was then allowed in great measure to recover consciousness before the trachea was opened, in order that the full effect might be obtained from the coughing which would follow the entrance of air through the tracheal opening. When the trachea was opened, the edges of the wound were held widely apart by the blades of a pair of tracheal dilating forceps, but as the boy coughed, mucus and blood alone were expelled. When the coughing had somewhat subsided, a fine laryngeal probe was introduced through the tracheal opening and passed down along the right wall of the trachea to the distance of about 3 inches. Then, by moving the point towards the middle line, I attempted to dislodge the foreign body. While this was being done the patient gave a violent cough, which resulted in the expulsion of a quantity of somewhat fœtid muco-pus, and, along with it, a portion of the kernel of a nut. More muco-purulent expectoration followed, accompanied by other two small portions of the the same material. On examination, it was found that air now entered the right lung freely. A Foulis' tube was inserted, and the patient put off to bed.

The largest portion expelled was pyramidal in shape, and the base which exhibited the brown covering of the kernel measured one-fourth of an inch across, and from base to apex it measured three-eighths of an inch. The two smaller portions together equalled the size of a split pea.

The tracheotomy tube was removed the following day, the edges of the wound stitched, and dressings applied. The patient had an uninterrupted recovery.

While speaking on this subject, I might be allowed to refer to a recent interesting experience of my friend Dr. John Wright. While on his round of visits, his attention was called to the condition of a child, who, while playing at "marbles," had placed one in its mouth, and had suddenly shown symptoms of choking. The child was unconscious, its face livid and covered with perspiration. He at once opened the trachea, and the child coughed the marble into the mouth, from which it was quickly removed, and the child was restored to life.

In such a case, with those urgent symptoms there is, of course, no doubt as to what should be done. Where the symptoms are less urgent, one with little or no experience of such cases tends to counsel delay. But—and notwithstanding the occurrence of occasional cases where, after a considerable interval of time, the foreign body is expelled during a violent fit of coughing—delay is exceedingly dangerous.

When a foreign body has entered the trachea or become impacted in a bronchus, whether the resulting symptoms be apparently trivial and occasional only, or whether they be severe and persistent, that patient is liable at any moment to suffocation by impaction of the foreign body in the larynx during any strong expiratory effort, as in coughing. A specimen exhibited by Dr. Cameron last session illustrated this. The child with a bean in the trachea, while apparently suffering no inconvenience from its presence, suddenly became livid and died of suffocation. But even where such an accident does not occur, can we say that the lungs will remain healthy? The reverse is my own experience, and thus I strongly urge operation in all cases where the method by inversion has failed to dislodge the body. While one attempts dislodgment by inversion, he must be prepared to open the trachea should spasm of the glottis be induced.

NOTES OF 1,028 CONFINEMENT CASES, BEING THE REPORT OF TWO YEARS' WORK AT THE WEST END BRANCH OF THE MATERNITY HOSPITAL.*

BY ROBERT JARDINE, M.D., M.R.C.S.,
Outdoor Physician to the West End Branch of the Maternity Hospital.

MR. PRESIDENT AND FELLOWS,—The West End Branch of the Maternity Hospital, at 491 St. Vincent Street, was opened for the purpose of supplying nurses and students to attend confinement cases at their own homes. The major portion of the work is done by the nurse who resides at the branch, but students and graduates are beginning more and more to take advantage of it, and during the past year eight graduates have been doing work at it. It is a splendid field for gaining experience, and I am sure it only needs to be more widely known to bring young graduates to it in preference to more expensive places.

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* Read at a meeting of the Glasgow Obstetrical and Gynæcological Society, 23rd November, 1892. A report of the discussion on Dr. Jardine's paper will appear in our next number.

The first case was attended on 13th June, 1888, and up to 16th November, 1890, there were 812 cases. During these two and a half years it was under the care of Dr. H. St. Clair Grey. For the last two years I have had charge of it, and during that time we have had 1,028 cases:—

Confined at full term, ...	932
„ prematurely, ...	65
Aborted, ...	31
	1,028

	Boys.	Girls.	Total.
Children born at full time alive, .	481	436	917
„ „ prematurely, . .	8	15	23
	489	451	940
„ „ at full time dead, .	16	14	30
„ „ prematurely, . .	20	19	39
	36	33	69

There were 13 cases of twins and 31 cases of abortion. One woman, of whom I shall subsequently speak, died undelivered.

The operative cases were:—Forceps, 63; version, 10; craniotomy, 1; induction of premature labour, 1—75. Maternal deaths, 5.

173 of the cases were primiparæ. The two youngest were aged 15 years, both normal labours, and the oldest primipara was aged 42, a forceps case. The oldest multipara was aged 48, and had borne the largest number of children—viz., 18. In one case there was only 9 months and 18 days between the births of two children, both apparently full time.

The following were the abnormal presentations:—Breech, 27; foot, 9; transverse, 3; hand and head, 2; cord and hand, 1; face, 1; cord, 6. The remainder were cranial, but I have not attempted to classify them under their respective positions, as the majority were merely reported as cranial, and no position given. The face case terminated naturally. Of the occipito-posterior cases 9 persisted, and the children were born face to pubis, 7 by means of forceps and 2 naturally.

The forceps I have used in most of the cases is Milne Murray's modification of Simpson's axis traction. I have found it act admirably in all cases whether high or low. In a few instances I have used a straight pair, but much prefer the axis traction kind. About one half of the cases were above the brim. In many I gave chloroform, especially in primiparæ, as it allows more freedom of action, and one can deliver at his leisure and save the perineum. I have only had to stitch the perineum six times, and of these two were in persistent occipito-posterior cases in primiparæ. The worst tear of all occurred in a normal primiparous labour. In spite of the nurse's efforts to prevent it, the tear began at the anus and extended forward. I found the edges very ragged, and had to pare them before uniting. In all the cases good union took place.

The nurse usually allows the second stage to go on for two hours, and if there is no advance, then sends for assistance. The placenta is expelled by external manipulation, and pressure kept up for a short time before the binder is applied. Ergot is generally given, but never before the third stage is completed.

The antiseptic used is a weak solution of perchloride of mercury. If the delivery has been natural and no bleeding ensues, the patient is not douched. Cleanliness is enforced as rigidly as possible, but many of the patients are so filthy in their habits that it is almost useless to attempt keeping them clean. I have known them object to going into the hospital simply on the score that they would be bathed there. We have had comparatively few alarming rises of temperature, but when a rise does occur the patient is at once douched, the bowels cleaned out, if loaded, quinine given, and if the lochia are scanty, stupes or poultices applied. If the rise is above 102° I usually douche out the uterus with 1 to 2,000 perchloride of mercury, ending up with pure warm water. I have never found absorption of mercury take place. I use a curved, grooved, glass nozzle, and introduce it to the fundus. In many cases the sudden rises of temperature is accounted for by the fact of there having been a drunken brawl in the house, in which the patient has taken an active part.

Nurse always pays particular attention to the washing of the child's eyes with a weak solution of perchloride, so that ophthalmia has been exceedingly rare. In the few cases that have occurred a strong solution of silver nitrate (10 grs. to 1 oz.) has quickly checked it.

I purpose giving notes of a few of the abnormal cases, and shall begin with the fatal ones. There have been five fatal cases, three during the first year and two during the second.

The first was a multipara aged 33 years, seventh confinement. The child—premature, eighth month—was born when nurse reached her. As the membranes were adherent, I was sent for, and found the woman was very ill with pneumonia of the right lung, for which she was being treated by a man who is known as a doctor in the district, but has no qualifications. The pneumonia proved fatal two days later.

The second case occurred during my holidays. It was one of placenta prævia in a multipara aged 27, fifth confinement. The woman refused to allow the nurse to touch her. Dr. Marshall, who was kindly doing my work, was sent for, and went at once, but only arrived as she was drawing her last breath. As the child was dead, he did not attempt to deliver *post-mortem.* This woman had been bleeding for at least twelve hours before the nurse was sent for. Had the nurse been sent for when the bleeding first came on, in all probability the patient's life would have been saved.

The third case was one of puerperal fever. Patient was a multipara, sixth confinement, aged 30 years, and was attended by a student. The labour was easy, the child being born before he reached her, and the placenta was expelled naturally. On the morning of the third day she began to complain of severe pain in the head; pulse was 120, and temperature 101·6.° I douched the uterus with perchloride of mercury, put her on 5 grain doses of quinine every three hours, and 10 grs. of Dover's powder at night. The lochia were not very foul, but rather scanty. There was no tenderness over the abdomen. Next day the temperature was 104° in spite of the quinine, so I changed to 20 grs. of sod. salicyl. every three hours and stimulated freely. This brought the temperature down. She was douched regularly twice a day. On the fifth day she complained of pain in the chest, and I found congestion coming on at the base of the right lung. Digitalis and ammonia were given. She gradually grew worse, and died on the tenth day. There never was much tenderness over the abdomen.

As to the cause of the fever, it was clear she had not been infected by the student, as all his other cases escaped. Of course, he was not allowed to attend any after the fever manifested itself, and I would not allow him to resume work for several months. She was lying in a filthy dark room behind a small shop in Richard Street, and there was a foul W.C. within a few feet of the bed. I also found a child in the same bed recovering from measles, with neglected suppurating sores all over its head, and at the side of the bed was another child in a cradle, with the bedding under it simply steaming from the excreta discharged into it. Under the circumstances there is little wonder she was infected. I notified the sanitary authorities, but they did not deem it advisable to remove her.

The fourth case occurred in the beginning of October of this year. Patient was a multipara, aged 37, tenth confinement, and had been in labour twenty-eight hours. She was very nervous and anæmic. The head was in the pelvis. I delivered a live male child very easily with forceps. The placenta was adherent, and had to be stripped off. She was douched. Her husband, about whom she was very anxious, was lying in the same room, said to be suffering from rheumatism. On the third day her temperature ran up to 103°. There was no uterine pain, and the lochia were sweet. I douched out the uterus, and gave her 10 grains of quinine, to be repeated in 5 grain doses every three hours. Next day the temperature was 100°. This sudden rise of temperature I attributed to anxiety and worry, as it had been decided that her husband should be taken to the Infirmary. She kept well, with the temperature practically normal for a few days, until the removal of her husband, when she again had a rise to 101°, but next morning it was 99°, and normal the day following. Pulse was also normal on the tenth day, and she was up for a short time. Next morning, about seven o'clock, one of her children came into bed with her, and put his cold feet against her back. She was at once seized with a rigor, and when nurse called in the middle of the day, she found the temperature 103°, and pulse 120. There was slight pain at the side of the uterus. She was douched, turpentine stupes applied, bowels cleared out, and quinine given as before. In the evening temperature was 104°; pulse, 130; no pain over the uterus, lochia sweet. Quinine, 10 grains given, and 5 grain doses continued, and stimulants added. Next morning the temperature was 105·4°. She had been very sick. I douched the uterus, and, as the stomach would retain nothing, she was given a nutrient enema with 10 grains of quinine in it. She had a very pinched anxious expression, and the tongue was brown, but moist. She had a slight cough, and there were some crepitations at the right base anteriorly, but no dulness. The temperature fell 2½°, but quickly rose again, and she gradually sank, and died on the thirteenth day after the confinement, forty-five hours after the rigor. This woman stated that she had always made bad recoveries, and never missed having a rigor. She was in a most unfavourable state of health, both physically and mentally. I am at a loss to account for this sudden seizure at a time when one usually looks upon a woman as out of danger. She was living in a very good house for her class, and there was no W.C. or drains near her so far as I could ascertain. I am quite sure I removed all the placenta, as I carefully examined it, and showed it to the lady students who were present. In the centre of it one of the lobules had degenerated into a mass of fat about the size of a walnut. That she was not infected by me I feel confident, as I had delivered a woman in private three hours before, where I also had to introduce my hand into the uterus. This patient recovered all right, and all others attended by myself, the nurse, and the students, during the next few days, escaped.

Within the last few days I have learned that the husband died in the Infirmary, and at the *post-mortem* examination it was found that he was suffering from cancer of the stomach.

The fifth fatal case was one of concealed accidental hæmorrhage. Patient was a multipara, eleventh confinement, aged 43. She had had two miscarriages, the last one early in January. She considered herself 8½ months pregnant. For some time she had been troubled with sickness and weakness. Her husband had been out of work for a long time, so she had not been getting proper or sufficient nourishment. About 11 A.M. she was startled by a loud knocking at the door, and she at once turned very sick and faint, and had to lie down. Nurse saw her at 1 P.M., and found her inclined to be sick and looking very feeble, but she stated her stomach had been troubling her for some time. By the vagina there was no indication of labour coming on, and no discharge. The bowels were very loaded, so they were cleared out by an enema. Nurse saw her again in the evening, and found there had been slight hæmorrhage externally, so sent for me. I saw her then, and found her very weak, with a very feeble pulse of 112, lips bloodless, and she complained of dizziness and flashes of light before the eyes, and the characteristic dull continuous pain in the abdomen. The os would admit a finger easily; the head was presenting L.O.A.; cervix was extremely hard and unyielding. There was no external hæmorrhage. The uterus was uniformly globular, and very much distended and tender. Nurse was directed to feed her with small quantities of prepared milk until I could return to deliver her. In a short time the pulse was stronger, and she was looking a little better, but a little more blood had escaped externally. Dr. Gowland, of Toronto, who was taking out cases at the Branch, kindly assisted me. I found the cervix very difficult to dilate with Barnes' bags, but managed it without having to incise, and delivered with forceps. Ergotinin was injected into the buttock as the child was delivered, and I at once introduced my hand and withdrew the placenta and membranes, which had been completely separated, and then turned out an enormous amount of clot, sufficient, I am sure, to fill a large basin. The uterus for a few minutes showed no indications of contracting under the usual kneading and injections of very hot water, followed by cold. I ultimately got it kneaded down. The pulse was faintly perceptible at the wrist. Ether was given hypodermically and the ergotinin repeated, and whisky given by the mouth and rectum. I also tried an injection of a pint of saline fluid into the rectum. This seemed to do a little good, but in spite of all our efforts she only lived an hour after delivery.

I have reported these cases fully, as I believe more is to be learned from them than from a large number of brilliant successes. We are all ready enough to report successful cases, and too ready, I am afraid, to bury our fatal ones in our note books.

The placenta prævia case we were in no way responsible for, and in the pneumonia case death can hardly be put down to the confinement, but even with these the death-rate is not high considering the conditions under which the work is done. It is not at all uncommon to find the patients quite drunk within a few hours of confinement, and it is very rare to find them in bed after four days, and many of them are out before then. I know of one case where the baby was born an hour or so before the nurse reached the woman, and the nurse afterwards learned that the patient had got out of bed as soon as the placenta came away, and walked across the street to get a drink of whisky in a public house. She made a good recovery.

Besides the fatal case of accidental hæmorrhage we had seven others. Four of these I have already reported in a paper read before the Obstetrical Section of the Medico-Chirurgical Society last session. The sixth one was in a case of twins. Patient was a multipara, aged 22, third confinement, 6½ months pregnant. Three weeks before she had flooded, and since then there had been a continuous slight discharge. As the pains were strong, and there was no bleeding, I ruptured the membranes and waited. In a short time a very small female child was expelled alive, head presentation, quickly followed by a second female, also alive, by the breech. The placenta was single, and very much degenerated, with a large black clot lying behind, fully one-third of it indicating where the separation had occurred. The patient was markedly syphilitic. She made a good recovery. The first child lived four hours, and the other nearly two days. The other two cases were not very severe, and were managed by the nurse.

Of placenta prævia there was a second one, which terminated favourably. The patient was a multipara, fifth pregnancy, aged 32. She had had several pretty severe hæmorrhages previous to labour coming on. I found the os dilated to the size of half a crown, head presenting L.O.A., and the placenta laterally attached. I dilated manually under chloroform, and turned the child, which was dead. The mother was very anæmic for a time, but made a good recovery.

We had six cases of *post-partum* hæmorrhage, all of which recovered. The treatment I invariably adopt is, before using the hot douche, to introduce one hand, and clear out all clots, at the same time firmly kneading the uterus with the other hand. Ergot is usually given, but I never place much dependence upon its action, except to keep up contraction afterwards.

I saw only two cases of hourglass contraction of the uterus. This speaks well for the care with which the third stage has been conducted.

Of eclampsia we had two cases, both of which recovered.

The first was a multipara, third pregnancy, aged 28. She had two fits before delivery and eleven after. I dilated by means of Barnes' bags, and delivered by forceps. The child was stillborn; the fœtal heart had ceased after the second fit. An enema of 30 grains chloral and 40 of bromide was given before delivery. She was quite conscious, and felt comfortable after she came out of the chloroform, but was seized an hour afterwards, and had eleven fits in all during the night, and remained unconscious for twenty-four hours.

The chloral and bromide was continued. The urine contained a large amount of albumen, some blood corpuscles, and granular casts. One of the convulsions was confined to the left side, and after she became conscious I found her left arm and leg powerless for a few days. She made a fairly good recovery.

The second case was a primipara, aged 26 years. She had the first fit with the onset of labour, and was said to have been unconscious for an hour, but we did not see her until twelve hours later, when she had two more fits within half an hour of each other. The same treatment was adopted —chloral and bromide by the rectum, and rapid delivery by forceps under chloroform. The os was fully dilated. Child was alive. She had one fit after delivery within an hour, but no more, and made a good recovery. The urine was perfectly normal. She was a very small woman, evidently of a highly nervous temperament.

There were several cases of contracted pelvis, but only two marked ones.

In the first, with a conjugate of 3 inches, I induced labour at seven and a half months by passing a bougie into the uterus. The head was abnormally large, and presented L.O.P. The forceps slipped, so I turned. We had considerable difficulty with the aftercoming head. The child was stillborn. The mother made a splendid recovery. This was the fifth stillborn child she had had. The pelvis had a very projecting promontory.

The second case was a primipara, aged 27, married, full time. I saw her three weeks before labour set in, and tried to persuade her to go into hospital, as it was clearly a case for Cæsarian section, but she refused, and said she preferred dying at home. The conjugate was barely 2½ in. The membranes had ruptured two days before she sent for us, and the liquor amnii had all drained away. Dr. St. Clair Grey kindly saw her with me. We found a loop of the cord presenting before the head. We decided to do craniotomy, but he first applied the forceps and drew the head down as far as possible. As there was no chance of getting it through, I at once perforated, and we broke up the vault, and delivered by means of the crotchet. It was very difficult to get a good hold with the crotchet. She made an excellent recovery, the temperature only once reaching 102°. She was typically rachitic, the legs being very much deformed.

Accidents during delivery.—In three cases the cord was torn through. In one, a primipara, after delivering the head with forceps, I found the cord round the neck, and in trying to slip it over the head it tore through. I delivered the child quickly, and as she began to flood, at once introduced my hand and peeled the placenta off. A hot douche checked the hæmorrhage. The child was alive. The cord was very short.

In another case, a breech, in a primipara, the cord was between the legs. I delivered the aftercoming head with forceps. The cord was lying loose in the vagina. It had evidently torn off at the placenta when I slipped it over the buttocks. The child was dead. The cord was about 9 inches long.

The third case was a most remarkable one. The child was born alive, completely enveloped in the membranes, which, along with the cord, had torn off at the placenta. It was the second child in a case of twins. The first, a girl, was a footling, alive. The second presented by the head. I punctured the bag of membranes with a hairpin, and liquor amnii gushed away. A dose of ergot was given. Strong contractions came on, and in a few minutes the child was expelled in the membranes. I at once tore them off the head and found the child, a girl, alive. Placenta No. 1 was expelled naturally, but I had to peel off No. 2, as the patient began to bleed freely. The cord, which was also about 9 inches long, had been inserted near the edge. The membranes and cord had separated from the placenta. There had been a collection of fluid between the chorion and amnion.

In one case the femur was fractured during delivery. It was a breech case in a primipara. The legs were extended on the chest. I passed a broad tape round the groin and delivered, but the femur snapped. I bound the thigh on the abdomen for a couple of days, and then put a splint on. It united in a few days.

We had 31 abortions. The majority of them came away of themselves without any trouble, but in a few cases I had to clear out the uterus. One curious case was attended by a student. The ovum came away intact. It was about the twelfth week. During the night the patient had considerable pain and hæmorrhage. Twenty-four hours after the abortion I saw her, as she was suffering great pain, and was becoming fevered. I found the uterus distended and very tender, and on examining turned out a large amount of clot and a fleshy mole, triangular in shape, and about the size of a spleen. She was immediately relieved of all pain, and subsequently made a good recovery. The student had taken the ovum to Dr. Reid, and I did not see it, but I believe there was nothing abnormal about it. I sent the mole to Dr. Reid, but unfortunately they have both been lost. I think it must have originally been a case of twin pregnancy in which one of the ova had been blighted, and its placenta had rapidly developed into a fleshy mass. There wás no fœtus in its cavity, which was lined with a smooth glistening membrane.

In another case I was called by a student, and found the woman blanched, and almost pulseless. She had been bleeding profusely for several hours. I removed a small placenta which was attached to the lower zone of the uterus. If the pregnancy had gone on it would undoubtedly have been a case of placenta prævia.

In one case a dead fœtus was retained in utero for four months. Patient, a multipara, aged 24, had given birth to two full term children, then a seven months' one, followed by an abortion before the present pregnancy. She ceased menstruating in the end of November, 1890. She felt life during April, but not subsequently. For the last three months she had not been feeling well. On 6th September, 1891, she was delivered of a dead and partly decomposed fœtus of the fifth month. She made a good recovery.

The placenta was adherent sixteen times. The most frequent cause of adhesions I found to be syphilis. I shall merely give notes of one case. Patient was a multipara, aged 32. She had an empyema of the left lung which Dr. Clark had opened three years before in the Royal Infirmary. It was still discharging a large amount of foul pus. There was tubular breathing all over the right lung. She was about six months pregnant. The fœtus was expelled by the breech. I found the placenta was so closely adherent all over, that I could not peel it off in the usual way, but had to scrape it away. The uterine walls were so thin there was great danger of perforation. She was very feeble, and I hardly expected she would recover; however, she made a very good recovery. She must have been proof against self-inoculation, as there was every opportunity for it.

There were a few deformities among the children—viz., an anencephalous fœtus, a case of talipes equino varus, one with only three toes on one foot (the great toe and fourth with the little one attached to its side); the second and third were wanting, as well as their metatarsal bones. In one case there was an extra great toe, and in another an extra little finger on each hand. I removed the latter when the child was three weeks old. They were attached by a small pedicle, but each had a vessel which I had to tie. The mother had been born with the same deformity. There was only one case of harelip. One child was born with a very lax and wrinkled abdominal wall. It exactly resembled that of an old multipara. I suspect it must have been distended with fluid during intra-uterine life. The viscera all seemed normal except that the testicles had not descended.

There was one very interesting case of hæmophilea in a premature female child. The cord separated on the eighth day, and next day the mother noticed a little oozing from the stump. Four days later this became more profuse; on the eighteenth day blood came from nose, mouth, and anus, and an ecchymosis appeared on the right side of the chest wall; the right knee and elbow both became swollen. Inside of the mouth ecchymoses could be seen on the palate, and next day they appeared on the left breast and back. She died on the twentieth day. The mother was not a bleeder, but she stated that her husband and little girl both bled profusely from the nose at times.

In two cases the patient suffered from mammary abscesses before delivery. In both sinuses remained. One was a multipara and the other a primipara. In the former case the abscess had burst a fortnight before delivery, and was still discharging pus freely. It healed under proper drainage and dressing. In the latter case there was only a sinus remaining, with very little discharge. The abscess had been opened by a doctor. She was tubercular, and had had suppurating glands in her neck a few years before. I advised her not to nurse, and it soon closed.

I have since seen two more cases in primiparæ, and have opened and drained both. In both cases the abscesses were very large, and they both healed up readily.

To me the work has been most interesting and instructive, and before closing my report I wish to tender my thanks to the nurses and students, whom I have always found ready and willing to carry out my instructions. I also desire to thank the medical men who have generously rendered assistance the few times I have happened to be out of reach, and especially Dr. George Marshall, who has kindly done the work during my vacations.

CURRENT TOPICS.

OUR PROGRAMME FOR 1893.

In beginning a new volume of the *Journal*, we are able to present our readers with an extensive list of gentlemen who have intimated their intention of contributing to our pages during the year 1893. In issuing this list, we have also the object of asking our readers to assist in extending the circulation of the *Journal*. In the past the income from subscribers and from advertisements has enabled us to make certain improvements in the *Journal*. We have in view certain further improvements, such as a more efficient illustration of the articles sent to us, which an increased circulation would enable us to carry out. We may add that we have frequent evidence of the esteem in which the *Journal* is held by the medical world at large, and that we look for the assistance of all who by association or local connection are interested in the prosperity of Glasgow as a medical centre.

James A. Adams, M.D., Surgeon, Glasgow Royal Infirmary.

John Aikman, M.D., Guernsey.

T. M'Call Anderson, M.D., Professor of Clinical Surgery, Glasgow University — *Clinical Reports of Cases in the Western Infirmary.*

J. Wallace Anderson, M.D., Physician, Royal Infirmary—*Notes by the Way in Physical Diagnosis.*

J. Grant Andrew, M.D., Glasgow.

A. G. Auld, M.D., Assistant Physician, Royal Infirmary, Glasgow.

John Barlow, M.D., Surgeon, Royal Infirmary, Glasgow.

Jas. Barr, M.D., Physician, Northern Hospital, Liverpool — *On Mitral Stenosis.*

Thomas Barr, M.D., Surgeon to the Glasgow Hospital for Diseases of the Ear—*On Auditory Vertigo.*

George T. Beatson, M.D., Assistant Surgeon, Western Infirmary—*On Intestinal Obstruction.*

George Buchanan, M.A., M.D., LL.D., Professor of Clinical Surgery, Glasgow University — *Lecture on Cases of Clinical Surgery.*

R. M. Buchanan, M.B., Assistant to the Pathologist, Western Infirmary —*Cases of Tumour of Brain.*

H. C. Cameron, M.D., Surgeon, Western Infirmary.

John Carlyle, M.D., Greenock.

Matthew Charteris, M.D., Professor of Materia Medica, Glasgow University.

John Cleland, M.D., LL.D., F.R.S., Professor of Anatomy, Glasgow University.

Joseph Coats, M.D., Pathologist, Western Infirmary — *Papers on Pathology.*

John Dougall, M.D., Physician, Glasgow Royal Infirmary — *Ergot in Diabetes Mellitus.*

J. Walker Downie, M.B., Surgeon to Throat and Nose Department, Western Infirmary—*On Affections of the Ear, Throat, and Nose.*

A. Freeland Fergus, M.D., Surgeon, Eye Infirmary, Glasgow—*On the Index of Refraction of the Aqueous Humour.*

David W. Finlay, B.A., M.D., Professor of Medicine, Aberdeen University.

James Finlayson, M.D., Physician, Western Infirmary, Glasgow.

Wm. Jas. Fleming, M.D., Surgeon, Royal Infirmary, Glasgow.

Donald Fraser, M.D., Medical Officer, Riccartsbar Asylum, Paisley—*On Word Deafness, with the Clinical and Pathological Record of a Case.*

W. T. Gairdner, M.D., LL.D., Professor of Medicine, Glasgow University.

W. F. Gibb, M.D., Surgeon, Paisley Infirmary.

John Glaister, M.D., Professor of Medical Jurisprudence, St. Mungo's College, Glasgow—*Some Medico-Legal Studies.*

J. K. Kelly, M.D., Lecturer on Gynæcology, St. Mungo's College, Glasgow—*Papers on Gynæcological Subjects.*

James Kerr Love, M.D., Aural Surgeon, Royal Infirmary, Glasgow—*On Deaf-Mutism.*

A. N. M'Gregor, M.D., Glasgow.

John Macintyre, M.B., Surgeon to the Throat Department, Glasgow Royal Infirmary—*Records of Cases of Disease of the Nose and Throat*, and *On Catarrh of the Nose and Throat, with Special Reference to Etiology and Pathology.*

J. G. M'Kendrick, M.D., LL.D., F.R.S., Professor of Institutes of Medicine, Glasgow University—*Recent Researches on the Physiology of the Pancreas.*

W. A. M'Lachlan, M.D., Surgeon, Dumbarton Cottage Hospital—*On some Clinical Aspects of Malignant Disease.*

William M'Lennan, M.B., Assistant to the Professor of Materia Medica, Glasgow University—*Is Hypnotism Humbug?*

Donald Macphail, M.D., Whifflet.

W. J. Marshall, M.D., Greenock.

T. Spence Meighan, M.D., Surgeon, Glasgow Eye Infirmary—*Clinical Notes of Ophthalmic Cases.*

George S. Middleton, M.A., M.D., Physician, Royal Infirmary, Glasgow.

Thomas Kirkpatrick Monro, M.A., M.B., Pathologist, Victoria Infirmary, Glasgow.

Alex. Napier, M.D., Physician, Victoria Infirmary—*Communications on Myxœdema and Pneumonia.*

David Newman, M.D., Surgeon, Royal Infirmary, Glasgow—*On Hay Asthma or Naso-Motor Rhinitis*, and *Four Cases of Pachydermia Laryngis.*

James H. Nicoll, M.B., Dispensary Surgeon, Western Infirmary—*On the Rôle of Intestinal Peristalsis in the Etiology and Symptomatology of Hernia.*

Thomas Oliver, M.A., M.D., Professor of Physiology, Durham University.

L. R. Oswald, M.B., Assistant Physician, Royal Asylum, Gartnavel.

James Paton, M.D., Greenock.

Alex. Patterson, M.D., Surgeon, Western Infirmary, Glasgow.

A. Maitland Ramsay, M.D., Surgeon, Eye Infirmary, Glasgow—*Paper on some Diseases of the Eye.*

J. Crawford Renton, M.D., Assistant Surgeon, Western Infirmary—*Notes of Cases of Cranial Surgery.*

Alex. Robertson, M.D., Physician, Glasgow Royal Infirmary—*Cases of Disease of the Nervous System.*

Frank Shearer, M.B., Physician, Paisley Infirmary—*Clinical Studies in Heart Disease.*

Samuel Sloan, M.D., Physician, Glasgow Maternity Hospital.

J. Lindsay Steven, M.D., Pathologist, Glasgow Royal Infirmary—*On the Parasitic Theory of Cancer.*

T. F. Tannahill, M.B., Medical Officer, H.M. Convict Prison, Borstal—*Papers on Malingering; Her Majesty's Prisons as Sanitoria;* and *Studies in Colour Blindness.*

Charles Workman, M.D., Lecturer on Bacteriology, St. Mungo's College, Glasgow.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—The fourth ordinary meeting of the Society will be held in the Faculty Hall, 242 St. Vincent Street, on Monday, the 9th inst., at 8 o'clock. The following specimens, &c., will be shown:—By Dr. Knox—circular saws designed to be used with the dental engine for trephining the skull, and other operations on bone; by Dr. Rutherfurd—a specimen of osteo-myelitis of the femur, with an unusual distribution of the necrosis, also a simple fracture of the femur which had caused thrombosis, and led to death by pulmonary embolism; by Dr. T. K. Monro—a tooth impacted in the bronchus, death from acute pneumonia and gangrene, &c.

DEPARTMENT FOR DISEASES OF THE THROAT AT THE ROYAL INFIRMARY.—We learn that the Managers of the Royal Infirmary have made arrangements by which the outdoor and indoor departments of this work shall be under the charge of separate surgeons. Dr. John Macintyre will have wards in the house for the throat, while Dr. Fullerton will attend to the dispensary cases.

SCARLATINA FROM ERUPTIONS IN THE UDDERS OF COWS.—We beg specially to direct the attention of our readers to the very valuable paper by Dr. J. B. Russell and Dr. Chalmers, with the added report of Dr. Klein, which we publish in this month's issue. The mode in which the epidemic was treated and its source determined reminds us of the imaginary detective stories of Edgar Allan Poe and Conan Doyle. It is almost a romance of detection of disease, but is a kind of story which has frequently appeared in our pages from the same hands.

REVIEWS.

An Introduction to Human Physiology. By AUGUSTUS D. WALLER, M.D., Lecturer on Physiology at St. Mary's Hospital Medical School. London: Longmans, Green & Co. 1891.

THE requirements of medical students have been kept constantly in view in the preparation of this text-book, which will undoubtedly take a high place among works upon Physiology. One is struck with its freshness of style, its conciseness of statement, and clearness of exposition. A distinction is always carefully made by the author between established facts and theories based upon them; and his experience in practical work as an experimental physiologist, coupled with his intimate acquaintance with the results of all the most recent investigations of importance, enables him to speak with authority upon many disputed points, and present his views in an attractive and convincing manner.

The book is divided into short chapters, to each of which is prefixed a summary or syllabus of its contents; and the student is expected, when he has read the chapter, to turn back and see how far the words of the summary enable him to form a clear mental picture of what he has read. An asterisk at the beginning of certain paragraphs indicates that they deal with the more difficult branches, and may be passed over by the junior student.

The arrangement of the matter is different from that which usually prevails, the first part being devoted to the phenomena of nutrition, the second to the phenomena of excitation, while the physiology of reproduction, the constitutional formulæ of the proximate constituents, and tables of units are relegated to an appendix.

A short introduction on living matter leads the way to a full discussion of the composition of blood, and of the changes it undergoes when shed. The effects of reagents and of certain forms of disease are mentioned.

The circulation is next discussed, and we have a particularly good statement of the factors which regulate blood pressure and the rapidity of the current, so put as to be of special interest to medical men, and of service in estimating the importance of variation from the normal condition.

A chapter on respiration follows, the parts of which devoted to the influence of respiration on circulation, and the control of respiration by the nervous system, are specially noteworthy as models of lucid discussion and exposition.

Then comes digestion, the more minute details being preceded by a brief description of the physiological anatomy of the digestive tube, and the "general drift" of digestion, with emphasis on the point that selective activity of the epithelium plays almost as important a part as the change of food from the indiffusible to the diffusible condition. The digestive movements are considered together, then the composition and properties of the digestive fluids, and finally a *résumé* is given of the present state of our knowledge as to the function of glycogenesis.

Renal excretion is next dealt with, the mechanism of urinary secretion and the composition of urine being fully discussed.

Food, dietaries, and animal heat form the subject of the next chapter. The paragraph as to how proteids are transformed and broken up in the body gives a concise account of what we know on this obscure subject, and the summary is so picturesque as to deserve quotation. "Thus, from proteid to urea there are three usual roads—(1) The short cut *viâ* leucin and tyrosin in the intestine, and urea in the liver; (2) the high road *viâ* circulating proteid; (3) the long narrow way *viâ* circulating and organ proteid. The centre of action is the living tissue element, which, while undergoing little change as to its own proteid, effects considerable change of the proteid solution which soaks through and around it. An analogy may serve to illustrate these alternatives. A sovereign may (1) be changed and spent at once (=excess proteid), or (2) be sent to the bank to form part of a balance which is being used up as required (=circulating proteid), or (3) be invested in comparatively permanent capital (=organ proteid.)"

The second part, devoted to the phenomena of excitation, is perhaps the most interesting description of this branch of the subject that has yet been written. Waller has made special study of this, and the masterhand is discernible everywhere, but more especially in the sections devoted to the electrical phenomena and appliances. The method of using the capillary electrometer, and its use in the study of the electrical variations of the mammalian heart, skin currents, retinal currents, glandular currents, and so on, are fully described.

The next chapters deal with the senses of vision and hearing, many of the phenomena of vision, however, receiving more detailed attention after the discussion of the central nervous system, which brings before the student in a compact form all the main facts known about the brain and spinal cord in a most perspicuous and readable form.

The few pages devoted to the embryo are of a purely physiological bearing, and show clearly the main points in which the embryo differs from the adult.

A bibliography of about fourteen pages, arranged according to special organs and functions, forms a useful contribution, affording students the means of finding fuller and more detailed information than could be given within the limits of a single volume.

Though not so encyclopædic as the larger text-books on physiology, little of real importance is omitted, and there is a freshness of handling and vividness of outline that render the book both eminently readable and fitted to impress the mind of the student. One does not readily forget such a statement as the following:—"To sum up, let us imagine that several leucocytes start together and get into the blood. One leucocyte may get attached to a vessel of an inflamed part, may pass through it and go to the bad as a pus cell, the constituent of an abscess; another may escape at the surface of a wound, and settle down as a connective tissue cell, the constituent of a cicatrix; a third may play the part of scavenger, and remove a foreign particle or destroy a microbe." The book is fully illustrated, many of the figures being original and, though diagrammatic, well designed to make clear the point under discussion.

It is singularly free from errors of a typographical nature.

The volume is of convenient size, neatly bound, and can be warmly recommended to all interested in the study of physiology.

Dissections Illustrated: a Graphic Handbook for Students of Human Anatomy. By C. GORDON BRODIE, F.R.C.S. In Four Parts. Part I: The Upper Limb. London and New York: Whittaker & Co.

WE have to call attention to the excellence of the work which has just left Mr. Brodie's hands. It is a series of plates depicting the normal anatomy of the upper extremity, and if the other parts come up to the one which has just appeared, they will furnish to many professional men a very valuable work of reference. There can be no doubt that the medical man who is at some distance from the teaching centres has at times considerable difficulty in refreshing his recollections upon anatomical points, and his hand is occasionally stayed from operations, even by a trifling uncertainty as to the exact position of vessels or nerves. Reference to an insufficiently illustrated text-book is a tiresome process, and often takes up more time than the busy practitioner can well spare; and the superimposed pictures, which for a time became fashionable, many of them inaccurate, and all of them clumsy, have come to be regarded more as playthings than as actual helps. To all in the position we have described, Mr. Brodie's work will prove of great assistance. The present part contains seventeen clearly drawn, and well coloured, partially diagramatised, pictures of dissections, each plate being of such a size that the eye has no difficulty in picking out at once the smallest important detail; while, at the same time, the volume is of moderate bulk, and can be conveniently handled. It forms a very complete directory of the regional anatomy of the upper limb. By the student preparing for examination, to whom the direct study of nature is at certain seasons denied, Mr. Brodie's book will be appreciated, as it will afford him a very easy method of revising a considerable portion at least of his work.

The Journal of Pathology and Bacteriology. Edited, with the Collaboration of a Numerous Staff, by G. Sims Woodhead, M.D., assisted in Special Departments by J. G. Adami, M.B.; Sidney Martin, M.D.; M. Armand Ruffer, M.D.; and G. E. Cartwright Wood, M.D. Vol. I: Parts 1 and 2. Edinburgh and London: Young J. Pentland.

We gladly welcome the appearance of a journal of pathology in this country, the first numbers of which have been sent to us for review. It is a sign of the activity in scientific medicine which, too long delayed, is beginning to characterise our medical schools and centres.

BOSTON MEDICAL
FEB 18 1894

The journal has made a good start in both its numbers. In the first there is a philosophical dissertation by Virchow on Transformation and Descent, a fit opening by the acknowledged veteran and father of existing pathology. This is followed by an article by Metchnikoff on Immunity, and there is a number of other papers, by less celebrated writers, of much value.

The second number in its general average is a distinct advance on the first; and it is written entirely by native authors. The reader will be attracted by a full account with excellent illustrations of Ruffer and Walker's observations on the Parasitic Protozoa in Cancers; a very valuable paper on the Characters of the Leucocytes of the Blood in Leucocythæmia is furnished by Dr. Muir of Edinburgh; Dr. Kanthack has a paper on the Madura Foot, in which he confirms the views of Carter that this disease is a form of actinomycosis; Dr. Boyce has interesting papers on a case of Infection of the Lung with Aspergillus, and on the relation of the Pituitary Body to Myxœdema; Dr. Joseph Coats contributes a short paper on the Pathology of Sudamina and Miliaria, and there are several other articles of much merit.

The papers are, where necessary, illustrated by lithographic plates, which generally have a high degree of merit. We would suggest that it would be an advantage if these plates were gathered at the end of the number. It makes, on the whole, the reading and reference easier.

We trust that this journal will have a long and successful career.

Epidemic Influenza: A Study in Comparative Statistics. By F. A. DIXEY, M.A., D.M. Oxford: Clarendon Press. 1892.

INFLUENZA is here considered from the ætiological standpoint, and the results are given of a most elaborate and careful examination of statistics relating to the epidemic of 1847-48, as well as to those of the last three years. The published returns for London, Paris, Berlin, and other cities are analysed with admirable thoroughness, those issued weekly by the Registrar-General's Department in London having been found most suitable for Dr. Dixey's work. All the available data have been so studied and arranged as to give a mass of information, whose value is further enhanced by the tables and diagrams in which it is embodied. The lines along which the enquiry has been conducted may be gathered from the headings of the sections dealing with the epidemic of 1891-92.

"1. The general course of the outbreak.
"2. The influence of meteorological conditions.
"3. The effect on the mortality from other diseases.
"4. The epidemic in its relation to age and sex."

A Short Manual of Inorganic Chemistry. By A. DUPRÉ, Ph.D., F.R.S., and A. WILSON HAKE, Ph.D. London: Charles Griffin & Co. 1892.

AMONG the host of smaller manuals of inorganic chemistry, many of which might very well be dispensed with, Drs. Dupré and Hake's book stands out as one which may with confidence be recommended to junior students of chemistry. The first part of the book—about one-fourth of the whole—consists of an "Introduction," in which general principles are discussed, and the physical properties of substances, the laws and theories of chemistry, chemical notation and nomenclature, &c., explained and illustrated in simple, clear, and striking terms. The descriptive part, in which the properties of the commoner elements and of their more important compounds are dealt with, is marked not only by general accuracy and judicious omission of unimportant details, but also by excellence of arrangement, and with a special view to the wants of medical students, the physiological action of many substances is briefly described. The book is not wholly free from minor errors; thus, for example, the atomic weight of antimony is erroneously given as 122 on p. 305, and there is one strange omission—viz., while rare elements such as decipium and norwegium, of which the individual existence is still very doubtful, are noticed, the interesting element germanium, which was discovered by Winkler in 1886, is not even mentioned, although the table of the elements on pp. 8 and 9 professes to be complete. Many teachers too would be inclined to take exception to the authors' view that general principles should precede descriptive chemistry, though it cannot be denied that in text-books at any rate there are advantages in such an arrangement. The book, however, has many good features, not the least of which is that it is written in such a terse and lucid manner, that it can hardly fail to prove interesting—even to a medical student.

The Calendar of the Royal Veterinary College for 1892.
London: Acland & Son.

It will be enough if we, for the benefit of any of our readers who may be interested, mention the principal contents of this little volume. We have a list of governors and staff, the charters, bye-laws, and regulations, syllabus of lectures, fees, prizes, scholarships, names of students, legacies, and examination papers.

The Australasian Medical Directory. Edited and Compiled by Ludwig Bruck. Third Edition. London: Baillière, Tindall & Cox. 1892.

This work is not published yearly, the last edition having been issued in 1886. The present issue is corrected till 31st August, 1892. An interesting addition to the Directory is a General Gazetteer, Local Directory, and Road Guide, which gives a brief account of 1,560 post towns. This part will be useful to any one who thinks of the colonies as a field for medical practice.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1892-93.

MEETING III.—4TH NOVEMBER, 1892.

MEDICAL SECTION.

The President, DR. JOSEPH COATS, *in the Chair.*

PERNICIOUS ANÆMIA: A CLINICAL STUDY.

BY DR. GEO. S. MIDDLETON.

Dr. Middleton's paper will shortly be published in full, with details of the eleven cases, which had been at his disposal. Ten had been patients in Dr. Gairdner's wards in the Western Infirmary, and the eleventh had been seen in consultation with Dr. Macpherson of Cambuslang. The results of the analysis of these cases, which were submitted, may be summarised as follows:—

A. With regard to *œtiology,* not one of the facts mentioned by the patients themselves could be considered as of supreme moment, and no other causes could be discovered in any of the cases; in particular there had been no wasting discharges.

B. In view of the importance of *early diagnosis,* when possible, the endeavour had been made to determine any symptom which could be regarded as characteristic: but all that could be said was, that while there was nothing to distinguish absolutely the beginning of pernicious anæmia from that of ordinary anæmias, the chief points to notice were, the early development of weakness, even before pallor attracted attention, and the frequency of digestive derangements.

C. Among the *clinical features of the disease, when fully established,* one should particularly note the peculiar sallowness accompanying the pallor; and, with regard to the examination of the blood, the change found most characteristic had been that the hæmoglobin was not deficient to the same extent as the red blood corpuscles. The remaining red blood corpuscles would thus seem to have had a larger supply of hæmoglobin than normal, supposing them all to have been counted—15 per cent was the lowest estimate in any of the cases, for the hæmoglobin; 10 per cent for the red blood corpuscles. Hæmic bruits over the heart and in the neck had not been so well marked as in simple anæmias. Enlargement and tenderness of the liver, and enlargement of the spleen, were noted in several cases. Examination of the urine had been made for excess of iron, but with negative result; sometimes a slight quantity of albumen had been present. There had been nothing very abnormal with regard to uterine functions, though gradual cessation of menstruation was mentioned in the reports more than once. Most of the patients had complained of pain in some part of the body, headache being most frequent. Drowsiness, sleeplessness, and tremors were among the other nervous symptoms treated of. Fever had not been constantly present, but when it had occurred it had been intermittent. The actual height to which the temperature had risen had showed no relation to the severity of the attack; even the absence of pyrexia had not necessarily indicated a less severe case. Among the hæmorrhages noted were—epistaxis, bleeding from the gums, from the stomach, and into the retinæ.

D. Various *complications* were mentioned, the most important being (1) locomotor ataxy or peripheral neuritis; (2) tremors and hemiplegia; (3) tuberculosis of the lungs; (4) unilateral pleurisy; and (5) suppurative parotitis.

E. The ultimate result had been bad in most cases, but there had been four recoveries—for a certain time at least. The disease was thus improperly named "progressive," and the *prognosis* was not so bad as was formerly thought; still it appeared as if relapses were likely to occur, and they had indeed occurred, in two of the four cases just mentioned, and ended fatally.

F. Examination after death had been made in three cases, and in all of them typical alteration of the bone marrow had been found, and there had been fatty degeneration of internal organs.

G. Treatment had included dieting and rest, and the administration of iron and of arsenic; the latter drug had given the best results, but required to be used in full doses, and over a long period; it did not increase irritability of the stomach if that were present.

Theories as to the pathology of pernicious anæmia were intentionally left undiscussed, Dr. Middleton preferring to make his paper essentially a clinical study.

Microscopical specimens were shown which had been prepared by Dr. R. M. Buchanan to demonstrate the changes in the blood and the iron-reaction in the liver.

In the discussion which followed, part was taken first by

Dr. M'Call Anderson, who expressed the indebtedness of all present for the excellent paper which they had just listened to. Like most physicians who were not now so young as once they were, he had seen a good many cases of pernicious anæmia, and he could corroborate all that had been said, both as to symptoms and as to treatment. The disease was a rare one, but not so rare as hospital statistics would seem to imply, and he had seen a number of instances of it in consulting practice. With regard to diagnosis, he quite admitted that if they read, in a book on medicine, on pernicious anæmia and on chlorosis, they might have difficulty in arriving at a distinction; but, if they saw a case of each disease in neighbouring beds, they would have little hesitation in saying which was one and which was the other. He had had a case in the Western Infirmary during the last few months which presented several points of interest. The patient (a girl of 17) had been first seen by him in early summer in consultation with Dr. Paterson of Partick. Two months thereafter her exhaustion and tendency to fainting had increased so much that she had been sent into hospital with the idea of transfusion being performed. She had been admitted on 11th July, 1892, and her symptoms had then been typical, and included extreme pallor, with a peculiar tinge, retinal hæmorrhages, fainting on sitting up, the red blood corpuscles numbering only 1,230,000 in the cubic mm. She had been seen by Dr. Newman, in view of possible surgical assistance. Treatment by arsenic had, however, been adopted, 5 m. of Fowler's solution being combined in a mixture with ammonio-citrate of iron and digitalis,and attention being paid to frequent feeding. On the 13th July Fowler's solution had been begun subcutaneously also—one injection of 5 m. daily to begin with, increased on 27th July to 10 m. once daily. Marked improvement had taken place, and after a month she had been able to get up. In September the red blood corpuscles had numbered 2,666,000 in cubic mm. Progress continued in the right direction, till in October an intercurrent affection set in, which proved fatal in ten days. The temperature had previously shown merely transitory rises, but on 9th October had been found in the evening to be 102·2° F., with chill and complaint of sore throat and of pain at the seat of one of the hypodermic injections. Physical signs of pulmonary disease had been subsequently detected, and there had also been some dysphagia; the fever had continued and death taken place on the 19th. Dr. Coats would be able to give details as to the appearances at the *post-mortem*, and Dr. Anderson would only further add, in connection with the case, the question as to whether it was possible that the hypodermic syringe might have been at fault through defective sterilisation.

With regard to the treatment of pernicious anæmia, he had never seen benefit except from arsenic, and he might further say that there had never been a case which he had seen early enough, and in which arsenic could be pushed, where that drug did not give improvement. It should be pushed—by the mouth and subcutaneously—and the error should not be made of relaxing the treatment too soon, otherwise relapse was likely to occur. Another medicine which had recently been mentioned (as in the October number of the *Edinburgh Medical Journal*) was β-naphthol, its action being explained as due to its antiseptic properties.

The only other method of treatment to be recommended was by transfusion of blood, of which he could give no personal experience, but on which there was an interesting paper in the November number of the *Edinburgh Medical Journal* by Dr. Brakenridge.

Dr. Coats said that the *post-mortem* referred to was the one from which he had obtained the fresh specimens shown at last meeting (see page 446, vol. xxxviii). He could offer no suggestion as to the connection with pernicious anæmia of the appearances found.

Dr. Lindsay Steven asked what had been the condition of the bone-marrow.

Dr. Coats said that it had been red, but not diffluent or containing any large granular cells. He had examined the liver for the iron-reaction; but it had not given it, though he had always found that reaction in pernicious anæmia cases since attention was drawn to it.

Dr. M'Call Anderson pointed out that in this case recovery from the anæmia had already taken place, and that death was from the intercurrent affection, and not from the pernicious anæmia, as in the other cases which Dr. Coats had tested.

Dr. Gairdner also had been interested in Dr. Brakenridge's paper. He had had no personal experience of transfusion, and had formerly been prejudiced against it, because it had not seemed likely (if the disease were regarded, in accordance with Dr. Hunter's view, as essentially a destruction of corpuscles in the liver by a ptomaine or other destructive substance derived from the alimentary canal) that such a disease could be met by transfusion within any reasonable limits. Everyone knew that repetition of the operation frequently was out of the question. After careful reading of the paper, however, he had altered his ideas on the subject, and would now keep transfusion in view for any case which resisted other treatment, because, so far as Dr. Brakenridge's cases went, even one transfusion had done well, and when it had had to be repeated, that had been only at intervals of months. Further, the quantity of blood transfused was very small—indeed, only a few ounces. If Dr. Brakenridge was right, and his data satisfactory and sufficiently numerous to carry the apparent result, Dr. Gairdner thought they must in all probability admit that transfusion of blood had an influence beyond the addition of the amount of blood transfused; they might compare it to the transplantation of a piece of skin on to an ulcer. It seemed to have some action in the way of rectifying the blood-forming processes. This brought up very sharply the question of the pathology of pernicious anæmia. On Dr. Hunter's theory it was very difficult to see why transfusion should thus be successful, but if the disease was dependent on a deficiency in the blood-formation, they could understand it more readily. All the circumstances he had mentioned had led to Dr. Gairdner's concluding that there was more in transfusion than he had thought. His success lately with arsenic, however, had been such that the question of other treatment had not arisen. He agreed with Dr. M'Call Anderson that in some cases where that drug seemed to fail, the failure was due to insufficient dosage. In private practice he had, within recent years, seen a case in which the action of arsenic had been very striking. The patient was a landed proprietor, and no cause had been ascertained for his illness. His condition had been very alarming, with symptoms of pernicious anæmia, and also with a very marked irritability of the colon, almost like dysentery, and a great deal of upsetting of the stomach. He had thus recommended arsenic with reserve, and they had been very cautious in their administration of it; but from the very first it had done well, and they had pushed it up to full doses, the condition of the colon also improving. That was certainly three or four years ago, and the patient was now well, though somewhat troubled by the bowels.

As bearing on another branch of the subject, he might add that this disease had been known to him for a long time, though he had not been able at the time to name his earlier cases. In his *Clinical Medicine* several cases were recorded which no one would now doubt to have been instances of pernicious anæmia. He had had no experience of β-naphthol.

Dr. Lindsay Steven, so far as his experience of pernicious anæmia went, would not be inclined to say that diagnosis during life was easy, and in this view he had been confirmed while following Dr. Middleton's analysis. Reference had there been made to "complications," and tuberculosis of the lungs, gastric hæmorrhage, and epistaxis had all been mentioned. Further, certain symptoms had occurred early in certain cases, and these symptoms, as well as the "complications," might possibly have to be regarded in a causal relationship to the disease. The remark about piles which had been introduced early in the paper, also pointed in the same direction, and these cases might not have been instances of pernicious anæmia, especially if they adopted Dr. Hunter's understanding of it. Dr. Steven was inclined also, from his own study of it, to consider true pernicious anæmia as a somewhat rare affection, and to think that a considerable number of cases regarded as such were secondary to a cause not recognised. He referred to the only two cases (out of over six hundred which he had had to examine, as pathologist of the Royal Infirmary) in which this diagnosis had been made. One had already been published (see p. 300), and in it the *post-mortem* appearances had confirmed the clinical observations; in the other the blood after death had showed no poikilocytosis, no microcytes, no nucleated corpuscles; the bone-marrow had been normal, and a large superficial ulcer had been found in the stomach (p. 302). The liver from this second case had not been examined for iron.

In pernicious anæmia, Dr. Steven thought that they had a condition, as pointed out by Dr. Hunter, in which something derived from the alimentary canal acted, in the portal system, on the red blood corpuscles; but he was quite alive to what had been suggested by Dr. Gairdner in that connection, and the condition of the bone-marrow might possibly be causal, and the manufacture of red blood corpuscles insufficient.

In regard to treatment, he agreed with what had been said about the advantages of arsenic, though he could not be certain as to the permanency of the cures. He referred to a case recently seen by him in consultation with Dr.

Andrew Richmond, of Paisley, in which that drug had answered well for a time.

Dr. Barlow asked if estimations had been made, in Dr. Middleton's cases, of the urea and of the colouring matters in the urine. Such estimations had a bearing on the question in the pathology of the disease as to whether there was too much destruction or too little formation of red blood corpuscles.

Dr. Middleton replied that no such investigation had been made.

Dr. Newman would limit his remarks to certain points in treatment; and, first, as regards the use of arsenic and arseniate of iron. In 1876 a personal friend had become affected with pernicious anæmia, the diagnosis having been confirmed by Dr. Gairdner. Under the use of Fowler's solution and of arseniate of iron he had improved; he had then gone out to Victoria, but had become weaker on the voyage, and required to be carried ashore. The treatment had, however, been continued, and now he was alive and quite well.

Then, with regard to transfusion, it was in that connection he had seen Dr. Anderson's case, while acting for Professor George Buchanan. They had found it impossible to get blood, and while they waited for it the patient improved remarkably, as Dr. Anderson had said. Arterial transfusion was the form he would recommend: he had employed it in a case, with Dr. Scott Orr, in 1884. The patient had had a brother who volunteered to supply the blood, and it had been taken direct from an artery, the quantity being judged by the condition of the brother's pulse. As much had been taken as had been considered safe, and while it flowed the patient's appearance had improved, and the lips brightened in colour. The improvement had been maintained for six months, but then there had been unfortunately a relapse, which had proved fatal, the parents forbidding a second transfusion.

Dr. Workman asked as to the number of *post-mortems* on cases of pernicious anæmia in the Western Infirmary, and referred to the fact mentioned by Dr. Steven that only two cases ostensibly of that disease had occurred within their time at the Royal Infirmary pathology rooms, while only one of these had had the diagnosis confirmed, there being thus 50 per centage of failure! He expressed his disapproval of the recent tendency to treat hypodermically, another instance of the possible dangers having been added to their list that evening. With Dr. Gairdner he agreed as to the difficulty of reconciling the recent pathological theory of pernicious anæmia with the improvement reported after transfusion. Dr. Newman's case of transfusion had shown only a passing improvement, and he anticipated that it would probably be so also in other cases.

Dr. R. M. Buchanan's clinical experience was limited to observation of one case for any length of time. He had seen other three or four cases casually in connection with the examination of the blood. As regards *post-mortems*, he had, as assistant to Dr. Coats in the Western Infirmary, seen some six cases in a little over three years. He would confine his remarks, therefore, to the *post-mortem* appearances. The most striking change, perhaps, was the condition of the alimentary canal, the wall of which, from the stomach downwards, had been markedly atrophied in all these cases. This he considered to have an important bearing on the tendency to gastro-intestinal disturbances mentioned by Dr. Middleton. It might also have a close relationship to the temporary recoveries mentioned, for the success following administration of such bactericidal substances as arsenic and β-naphthol pointed in a measure to the alimentary canal, or rather its contents, as having to do with the causation of the disease. He did not regard the bone-marrow as standing in any causal relationship, considering its condition to be just one of the phenomena of the disease to be taken along with the condition of the blood itself. The bone-marrow, indeed, showed an attempt at production rather than want of production of red corpuscles, an attempt, in short, to compensate for the excessive destruction of these cells.

Dr. Coats confirmed what Dr. Buchanan had said as to there being a larger proportion of pernicious anæmia cases than might have been expected from the remarks of Dr. Steven and Dr. Workman; at the Western Infirmary *post-mortem* room there had been a much larger number in proportion, and pernicious anæmia was not to him an unfamiliar disease. In regard to diagnosis, he could scarcely corroborate the "50 per centage" which Dr. Workman had based upon such frail numbers, but there had been cases diagnosed as pernicious anæmia which had turned out otherwise. One such case was interesting because of the connection with the alimentary canal. It had been a typical case of cancer of the stomach; in it the bone-marrow had been red, but had not shown any large granular epithelial cells, and there had not been the iron-reaction in the liver, to which he had referred already that evening.

With regard to the pathology of the disease, they must still remain in suspense, though they might regard as accepted the view usually associated with Dr. Hunter's name in this country (though he had not originated it)—viz., that there was a destruction of red blood corpuscles. That view was defective, in that it assumed that this destruction must take place in the portal circulation. The iron was indeed found in the liver, but then the liver was the regular place for the deposit of pigments. Neither was there proof that a ptomaine was the cause of the destruction.

With regard to the excess of hæmoglobin mentioned by Dr. Middleton, he would ask, if it might not be explained by supposing there to be some hæmoglobin dissolved in the blood plasma. He presumed that the yellowish colour of the skin was really a hæmatogenous jaundice, and the plasma might similarly hold some hæmoglobin dissolved.

Dr. Middleton, in reply, said that the discussion had been mainly on pathological questions, upon which he had intentionally not entered. He could not agree with Dr. Workman's view as to the uncertainty of diagnosis. Though there must be difficulty at the very onset of illness, still, with Dr. M'Call Anderson, he thought that the diagnosis could quite satisfactorily be made clinically, the facts of special importance being the patient's colour and great weakness, and the proportion of the hæmoglobin to the red blood-corpuscles.

As to the rarity of the disease, that was not so very great. Besides the cases he had quoted, he had; in the last two years, seen three or four in consultation. He had, however, no note of ever having had one at the Royal Infirmary Dispensary during the years that he had worked there.

Dr. Anderson had referred to the necessity of continuing arsenic. That was a point upon which hospital patients could not be trusted when dismissed. Dr. Macpherson's patient, however, had continued the drug up to the relapse, and yet the relapse took place. β-naphthol had been tried in one of the other cases which relapsed, but it did not seem to act satisfactorily, so the patient was again put on arsenic. He had been aware of Dr. Brakenridge's paper, but as he had himself had no experience of transfusion, he had not referred to it. In spite of Dr. Workman's suggestion to the contrary, Dr. Middleton thought that a good case had been made out for transfusion, and that in future that form of treatment must always be kept in view in cases not responding to treatment by arsenic.

MEETING IV.—2ND DECEMBER, 1892.

SURGICAL SECTION.

The President, DR. JOSEPH COATS, *in the Chair.*

I.—SLOUGH PASSED *PER ANUM:* INTUSSUSCEPTION?

BY DR. ROBERT JARDINE.

Dr. Jardine showed, as a fresh specimen, a mass which had recently been passed by a child six years of age, who had been seen in connection with the Moncur Street Medical Mission Dispensary. Three weeks previously a swelling about the size of an orange had been detected in the right iliac region, and the child had since been very seriously ill, emaciation and tympanites having developed. No blood had been passed from the bowels. The passage of the mass shown had been attended by pain; and during an examination of the abdomen since made, the original swelling had been found to be still present, very superficial and rather larger than when first observed. A second swelling had, further, been detected, near the umbilicus, and was about the size of a walnut.

Dr. Jardine could not say definitely what the specimen was. It had been standing in water, but so far no lumen had been detected.

Dr. Coats suggested that if it were left in running water it might become disentangled, and its nature be revealed. One naturally thought of intussusception.

II.—CASE OF CONGENITAL ABSENCE OF ULNÆ.

BY DR. J. HOGARTH PRINGLE.

Dr. Pringle showed a patient with the above deformity, and read notes upon the case. After some conversation it was agreed, on the suggestion of the President, to appoint a committee (consisting of Mr. Clark and Drs. Pringle, Barlow, and Bryce) to make further examination and report to next meeting of the Society (16th December).

III.—NOTES OF SOME SURGICAL ABDOMINAL CASES.

BY DR. J. CRAWFORD RENTON.

Dr. Renton read a paper with the above title, at the same time showing the patients whose cases are numbered (1), (2), and (3). The following is a brief outline of the histories and of the various points to which reference was made:—

(1) Case shown to the Society in March, 1891, and published in the *British Medical Journal* for 9th January, 1892; gastro-enterostomy was performed on 16th November, 1890, for relief of dilatation of the stomach due to pyloric tumour, now supposed to have been fibrous. The tumour cannot now be felt, and patient considers herself to be in perfect health.

(2) Case of gastro-enterostomy, published in *Glasgow Medical Journal* for December, 1892, p. 424. Patient still feels quite well.

(3) Case of pyo-nephro-lithotomy (calculus shown). Female patient, aged 24, admitted to Professor M'Call Anderson's Ward on 8th June, 1892, and transferred to Professor George Buchanan, in whose absence Dr. Renton operated on 28th June. A swelling in the right ilio-lumbar region had been present since confinement in latter half of April. There was pyuria, but no tubercular bacilli had been detected on examination by Dr. R. M. Buchanan. Vomiting was frequent, but pain was absent. Diagnosis was, that there was probably a renal abscess caused by a calculus, though the possibility of abscess opening into kidney or ureter, without a calculus, was also kept in view. Operation — Kidney cut down upon by posterior incision; large fœtid abscess found with a calculus in the ureter; calculus extracted with difficulty; cavity washed out; drainage tube introduced and usual dressings applied. Dismissed well 5th August, 1892.

(4) Ovariotomy performed twice upon the same patient (M. G., sent by Dr. Allan). A right multilocular ovarian tumour was removed in 1882, the patient being 43 years of age; the other ovary appeared then to be healthy. In February, 1892, a second tumour was removed—multilocular, adherent, and more difficult to deal with than the first. "The abdominal incision was made a little to one side of the former one, and it was interesting to note the firm line of union in the first." Patient made a good recovery.

(5) Abdominal tumour—exploratory incision on 3rd March, 1892. Previous presumptive diagnosis of malignant disease of anterior wall of stomach confirmed by operation. No harm resulted; indeed, patient felt relieved of some of her symptoms (Dr. Maclachlan's case).

(6) Abdominal tumour—exploratory incision. Result as above stated for (5). Patient aged 53; growth in right hypochondriac region (Dr. Lawrie's case).

In regard to cases (1) and (2) Dr. Renton said that the union had been effected by means of Senn's plates, which were considered to be absorbed in about forty-eight hours. He referred to the shortness of time occupied in performing gastro-enterostomy, and to the various means adopted for keeping patients warm during such operations.

In regard to case (3) he drew special attention to the absence of pain, and mentioned some other cases of renal calculus in which a similar absence had been noted.

In regard to (4) the importance of examining the other ovary at all ovariotomies was insisted upon.

And in regard to (5) and (6) the question was raised by Dr. Renton, "Should an exploratory incision be performed?" "Yes," he said, "I think it should in any case of doubt, and you will get some surprises before you make many, while at the same time you will satisfy the patient that the best has been done, even although you may be unable to do more than confirm the serious impressions you may have formed of the condition by external examination. The safety of the operation is established, and with proper care you will have no trouble with the management of such cases."

Mr. Clark had been specially interested in the cases of gastro-enterostomy. That operation was most frequently performed on account of malignant disease, and Dr. Renton's cases were the more interesting as they were not suffering from malignant disease, but from a dilatation of the stomach —from what cause it was not very evident. The operation had been much under consideration lately, and had been found to be simpler than was once thought. It had been much facilitated by the use of Senn's plates, but one difficulty about the plates was the fixation of them by ligatures. He thought a better arrangement that of "bobbin-tubes," devised by Dr. Mayo Robson for operations for intestinal anastomosis and gastro-enterostomy, and shown by him at the British Medical Association meeting at Nottingham. He had been astonished to hear Dr. Renton say that the Senn's plates were dissolved in 48 hours. At a *post-mortem* upon a case, in which the connection of the viscera had been quite successful, but which had proved fatal on the eighth day, Dr. Lindsay Steven had found one of the plates, only partly dissolved, in another part of the intestine. They had sought for the one in the stomach, but could not find it, and thought that the gastric juice was probably more active, as regards the solution, than the intestinal juice.

Another point was as to whether the operation was justifiable, unless there was some emaciation. He had seen lately a case of pyloric stenosis, and the question had been raised as to whether they should either split the pylorus or perform gastro-enterostomy. They might yet require to operate, but as there was no emaciation, operation had been postponed meantime, and treatment by washing out of the stomach was being carried out. That was just such a case as one wished further information for. If gastro-enterostomy proved to be an easy operation, lasting only about twenty minutes, and simplified by such means as the "bobbins" to which he had referred, then it must be justifiable, even in non-malignant cases. Senn's plates had helped to expedite the operation; but it would be still simpler if they could do without the plates. Such aids might be regarded as valuable "crutches" in the meantime, but should only be used till surgeons could get on without them, and the perfection of surgery would not be reached till they could safely suture edge to edge—bowel to bowel, or stomach to bowel, as the case might be.

In connection with gastro-enterostomy in malignant disease, Mr. Clark related a case of cancer of the pylorus in which he had recently advised against any operation—first, because the tumour was large and adherent, and secondly (and in relation to gastro-enterostomy), because there was no stenosis. There was no vomiting or great pain, and the patient took food well; it was thus doubtful if gastro-enterostomy would be of any advantage. The case illustrated further the fact that they might have (*a*) malignant disease without stenosis, just as they might have (*b*) stenosis without malignant disease. Dr. Renton's communication was valuable as showing how efficient this operation might be in the latter (*b*) group of cases.

Dr. Maclachlan (Dunbarton) spoke of the improvement felt by his patient after the exploratory incision by Dr. Renton. There was no doubt of the disease in that case having been malignant, as secondary nodules had appeared in the omentum and elsewhere before death on 16th November. He had had another patient with stenosis of the pylorus; gastro-enterostomy had been proposed, but permission to operate was refused. Treatment by counter-irritation and by washing the stomach out had been adopted, and recovery took place. There seemed a certain danger of those older measures being neglected, and of flying to the "simple" operation of gastro-enterostomy.

Dr. M'Call Anderson confined his remarks to the points which had been raised in connection with the case of renal calculus. He had seen a number of cases of that disease, and had been struck with the great variety of the symptoms produced. Dr. Renton had very appropriately dwelt upon the absence of pain in their recent case—that was a point which required to be impressed upon one's mind—and he had himself seen a case in which a calculus was passed although there had been no renal pain. Medicinal treatment was often successful in cases of renal calculus, but sometimes they did need the surgeon's aid, and they did not look for it in vain.

Dr. Nicoll asked Dr. Renton (*a*) if there was anything in the patient's previous history to indicate the passage of other calculi; the specimen now shown was facetted; and (*b*) whether he considered calculi in the cortex of the kidney to be commonly unassociated with pain (at an early stage at any rate), while those in the pelvis, or near it, were associated with pain.

Dr. Newman spoke first of the treatment of pyloric obstruction. Where there was malignant disease he was doubtful of the benefit of operation, so far as radical cure was concerned, and probably more good would be obtained from persistent washing out of the stomach—it should be done, however, twice a day at least till the contents became quite sweet, and then continued less frequently. He had seen a case last year with Dr. Middleton, in which the symptoms had been very serious (including coffee-ground vomiting, severe pain and anorexia), but they had been much improved after washing; indeed, when he saw the patient first, in August, 1891, he did not expect him to live many weeks, but death did not take place till January, 1892, and during the intervening months pain had been absent and a great measure of comfort enjoyed. The mortality after operation was very considerable, and if they took the average period of prolonged life after operation, he doubted if the result would be so good as that he had just mentioned. He had had a similar result in a more recent case, and in both of the cases the obstruction was nearly complete, as might be judged from the fact that in both of them the bowels acted only once in three weeks or a month.

As regards the treatment of renal calculus, to which Dr. Renton referred, he thought that at the present time there was too much tendency to operate. Before resorting to operation they should keep the patient at perfect rest in bed for a considerable time. A fortnight ago a case had been sent to him for operation; the symptoms included pain, hæmaturia, and passage of uric acid and oxalate of lime crystals; still, although there was no doubt about the diagnosis, he had ordered rest in bed for a month, and already the pain had disappeared. He had had at least a dozen patients with calculi in their kidneys, who, when treated by rest, completely recovered, and were now perfectly healthy and free from pain. His first case of renal calculus had come to him more than ten years ago, but though he had been anxious to operate he had told the patient to stay in bed for a month. At the end of that time hæmaturia and acute pain had gone, but there had still been a feeling of oppression over the left kidney. At the end of another month in bed the patient did not "know he had a left kidney." After another month the patient had been allowed to go about, and he had been well ever since (except for one slight hæmaturia during this last year), and enjoyed plenty of outdoor exercise. Dr. Newman had received his first suggestion as to the great value of rest in this regard from a preparation in the Royal Infirmary Museum; death had been caused by enteric fever, and, on enquiry, no history of renal disease could be discovered, although a large calculus had been found at the *post-mortem* in the cortex of the kidney, the granular tissue around it having contracted, and thus fixed it (Series VII, No. 60). It was different when the stone was in the pelvis of the kidney; there contraction was not likely to occur. While what he had just said was true, Dr. Newman recognised that one must be careful not to allow too much irritation to occur by delaying operating; for, if suppuration took place, the danger would be much increased. The mortality from operation for renal calculus alone was only about 2 per cent; from operation for calculus with suppuration it was about 36 per cent.

The question might, accordingly, be stated thus—Should one operate early, whenever the diagnosis of calculus was completed, or should the surgeon trust to rest? If the patient were allowed to go about, one did not know when suppuration might arise. Supposing the surgeon to be satisfied that in a particular case rest would be efficient, then one should resort to rest; but if there were indications that suppuration was likely to occur, he should operate at once.

Dr. Fleming wished to emphasise some of the practical points which had been mentioned by Dr. Renton. Recently, like Dr. Renton, he had come to attach importance to the maintenance of the patient's temperature during operations, and he had had a table prepared, somewhat similar to that which had been mentioned as being used by Dr. Macewen, but connected by tubing to the hot water tap and to the waste pipe. He had since had better results from his operations; there had been an immense diminution of shock, the patients had taken the anæsthetic better, and had had less after-effects from it.

Then, as to the tendency for both ovaries to be diseased —that was a recognised fact, and that week he had had an example of it. He had been removing an ordinary ovarian tumour and, as he always did, he had examined the other ovary, and found a cyst there too, of about the size of a walnut, and with a daughter-cyst enclosed.

That exploratory incisions were often advisable was generally admitted, but they should not be made unnecessarily, as sometimes the operation proved fatal.

Dr. Newman had dwelt strongly on the advantage of rest in cases of renal calculus. There was another aspect of the question, and that was the great difficulty, even if one operated, of being sure (1) that one had removed all the calculi from the kidney operated on, (2) that they would not recur, and (3) that there were none in the other kidney.

Dr. Renton, in reply, referred to the question which had been raised by Mr. Clark as to the length of time Senn's plates took to dissolve. He had himself mentioned forty-eight hours, because at a *post-mortem* they had found that they had disappeared from their original site; but he could not say that the bowel had been searched. It had, indeed, been doubted if bone lasted long enough. (See *Glasgow Medical Journal*, p. 456, vol. ii, 1892.)

Mr. Clark and Dr. Newman had both discussed the question of gastro-enterostomy in malignant disease. It must be remembered that the great object of the operation in malignant disease was to put the affected part at rest—to leave the pylorus out of account. Professor Senn had reported from fifteen to eighteen such cases in which life was prolonged for nine to eighteen months, and where no washing out of the stomach had been required after the operation. In cases of dilated stomach, it came to be very trying and wearisome to be always washing out the stomach. The second patient shown had used that method of treatment regularly for a long time, and had been himself very anxious to be operated upon. At the same time Dr. Renton would on no account perform gastro-enterostomy unless he was thoroughly satisfied that medicinal treatment was doing no good. He agreed with Dr. M'Call Anderson that in renal calculus also medicinal treatment was often successful; but the time sometimes came when the pain was not relieved either by drugs or by rest (to which Dr. Newman had very properly referred), and then there was nothing for it but to operate; if there was suppuration, of course one must operate. Like Dr. Nicoll, Dr. Renton had noticed that the stone shown was facetted; he had searched for others, but none had been found, and there was no history to suggest their passage; for the present, the patient was quite well. Dr. Nicoll's second question was a very difficult one to answer. As Dr. Newman had pointed out, there was not so much pain when the calculus was in the substance of the kidney as when it was in the pelvis or the ureter, but this could not be held to be a universal rule, for in the present case the calculus had been found in the ureter, and yet there was no pain. Pain was of course usual when a calculus moved into the ureter, but occasionally it might pass without pain along the whole urinary track, and be detected only by a click being heard on its coming against the vessel used. Nearly every case of renal pain and of symptoms suggestive of calculus required much consideration, and could be decided only on its own merits.

He was glad to hear Dr. Fleming's corroboration on the points he had spoken of.

IV.—FOREIGN BODY WHICH HAD BEEN IMPACTED IN THE RIGHT BRONCHUS AND REMOVED BY OPERATION.

By Dr. Walker Downie.

Dr. Downie's paper is published as an original article at page 30.

In *Dr. Knox's* absence, Dr. Downie read the following notes of a case to which he (Dr. Knox) had intended to refer had he not been prevented from coming to the meeting:—

"Wm. G., æt. 4 years, was admitted to the Royal Infirmary on 15th May, 1890, with the history of a horse bean having entered the windpipe twelve days previously. The accident happened on 4th May. The little patient was sucking the bean when it was accidentally carried back into the larynx. For a time the boy was in imminent danger of suffocation. He was taken to the Western Infirmary, and after the throat was explored with the finger and an emetic given, he seemed better, and was taken home. Since then he has been subject to spasmodic cough and dyspnœa, coming on at irregular intervals.

"On admission to the Royal Infirmary, it was noted that he breathed most easily in the sitting posture, and that he had at intervals severe paroxysms of coughing, each cough being followed by a long drawn crowing inspiration. During the paroxysm all the muscles in the front of the neck are drawn into vigorous action, and towards its close the lips become livid. There is a little expectoration of frothy mucus. The right side of the chest does not expand so freely as the left. Both lungs are resonant, but the respiratory murmur is much impaired in the right. In front, at the level of the second costal cartilage, there is a distinct musical sound with each inspiration. Soon after admission he had a very severe paroxysm, lasting three-quarters of an hour, with but slight remissions. He was much distressed. The veins of his face and neck were much distended, and the face livid. All the accessory muscles of respiration were called into play, and when the attack passed off he was much exhausted. Next morning tracheotomy was performed, and the edges of the tracheal wound kept open by a pair of forceps. A long probe was passed into right bronchus and moved around several times, but nothing was felt. There was much coughing, and immediately after a rather violent fit the bean was found lying behind the tracheal wound and easily removed. All the symptoms at once subsided, and the patient fell into a quiet sleep, and in six days was dismissed well. The bean was quite hard and firm, and did not seem altered in any way by its sojourn in the trachea."

Dr. Newman agreed with what Dr. Downie had said about impacted foreign bodies. In illustration of the difficulties one met with in such cases, he might refer to two which had occurred in his experience. The first of these was that of a child of 2½ years.* When seen on the evening of admission it had had a very manifest difficulty of respiration, and auscultation had shown that there was no air entering the left lung. There had been also an extraordinary distortion of the chest, occasioned by the heaving of the active side and the suction inwards of the inactive side, the child's ribs and cartilages being, of course, very soft. Dr. Newman had been inclined to operate at once, but had waited till the following morning, as there was no information available as to the character of the foreign body. On the following morning he had found that there was some air entering the left lung, and judged accordingly that the body must be soluble (and, probably, some form of sweetmeat), or that it had moved.

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* See *Glasgow Medical Journal*, vol. xxxvi, p. 268, 1891.

In five days the obstruction had disappeared, and, as he had not operated, and no foreign body had been expectorated, he concluded it must have been dissolved.

The second case was that shown by Dr. Macewen to the Pathological and Clinical Society on 11th November, 1889, and published in the Society's *Transactions*, vol. iii, p. 218. Soon after admission to the medical ward the patient had come to be examined by him (Dr. Newman) in the throat ward, and had showed no dyspnœa even though she had three stairs to ascend. He had not then operated, but a few days afterwards (either on account of inflammatory swelling or of some alteration of the position of the foreign body) severe dyspnœa had been developed, and as Dr. Newman was from home, the case had been sent to the surgical ward, where a portion of nut had been removed by Dr. Wm. Macewen.

Dr. Downie considered his position supported by the cases Dr. Newman had related. He might add to what had been said, that an article had recently appeared in the *British Medical Journal* on impacted foreign bodies, but with its conclusions he could not at all agree.

V.—CHRONIC SUPPURATION IN ANTRUM OF HIGHMORE—OPERATION—REMOVAL OF NECROSED BONE AND OF TOOTH GROWING FROM UPPER PART OF OUTER WALL OF ANTRUM —CURE.

By Dr. J. Walker Downie.

Maggie D., aged 6, was brought to the Dispensary in connection with the Royal Hospital for Sick Children on account of a copious foul-smelling discharge from the nose. The history obtained was that about two years ago the child complained of pain over the right cheek. This was followed by swelling over the region of the right superior maxilla. As it increased in size, it caused the right eye to be partially closed, and it pushed the nose towards the left, and a foul-smelling discharge began to escape from the right naris. It had been regularly poulticed under the direction of a "bone-setter" during the past six months, but as the cheek became more prominent, and as the child was becoming peevish, and was losing flesh, she now sought advice elsewhere. The prominence of the right cheek was very pronounced, the right eye was partially closed by pushing up of the lower lid, and the right side of the nose was swollen and the nose itself pushed over towards the left. The swelling of the cheek was hard and smooth. On examining the right naris, the right inferior turbinated bone was seen to be so much swollen and displaced as to come into contact with the septum nasi; and this naris contained a quantity of foul-smelling, purulent discharge.

On raising the upper lip immediately above the right canine tooth, extensive ulceration of the mucous membrane was visible, and on using a probe here, it was found that the bone beneath was necrosed over a considerable area.

On 22nd October, the child was placed under chloroform, and the necrosed portion of superior maxilla fully exposed. It was then found that the right lateral incisor tooth and the right canine, both of which were in a carious condition, and which I have here, were embedded in the necrosed bone. I therefore extracted both teeth, then removed the necrosed area of the anterior wall of the antrum of Highmore. On this being done, a large quantity of foul-smelling pus escaped. Having washed out the cavity, I introduced my little finger and explored the interior. At the upper and anterior portion of the cavity a hard body was felt, firmly attached to the wall, from which it projected into the cavity. This was carefully seized with necrosis forceps, and on removal, proved to be a permanent canine tooth. The crown of the tooth is large and fully developed, and the fang is in a forward state of development. It appeared to be attached to the outer wall of the antrum, and the remains of the tissue, through which it was connected with the wall, are shown on the specimen. It is difficult to account for the peculiar position of this tooth. It may have been displaced as the result of inflammatory swelling, by which the mucous membrane, in which the embryo tooth was growing, was separated and pushed upwards.

There was some discussion (in which Mr. Clark, and Drs. Barlow, Fleming, and Newman took part) as to the exact situation of the tooth, and its relation to the suppuration.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

SURGERY.

By HENRY RUTHERFURD, M.B.

Adhesions and Bands as Causes of Severe and Persistent Colics.—Lauenstein narrates 9 cases of this kind on which he has operated; in one of them the operation was repeated successfully after an interval of six months, making a series of ten operations, with one death. The fatal case was from collapse on the day following the operation. The operation was by no means a severe one, but the patient, a man of 52, was feeble.

In all the cases the symptoms had extended over a series of years, all had been treated by several and some by many physicians, and in all, before proceeding to exploratory incision, exhaustive examinations were made by the methods of the physicians and gynæcologists.

In most of the cases the procedure was by median incision, followed by systematic exploration of the intestine. Beginning with the cæcum, the vermiform appendix was examined, and then the great intestine. Next the small intestine was traced upwards, and then attention given to the stomach, gall-bladder, kidneys, and pelvic organs.

In 3 cases the site of the incision was determined by the existence of special sensitiveness to palpation or the localisation of pain.

In the development of adhesions and bands a part is played by all so-called inflammations in the abdomen. The importance of gall-stones in this connection has already been demonstrated by Riedel (*Correspondenzbl. d. a. Artzl. Verien, v. Thüringen*, 1891). Besides this Lauenstein mentions gastric ulcer, the introduction of corrosives into the stomach, the free communication of the female genitals with the abdomen, and finally laparotomies.

Bands are commonly supposed to be derived from the omentum, but the omentum is often unaltered, and the theory is unnecessary. It is reasonable to suppose that they result from traction exerted on adhesions which form between surfaces which are for the time lying in contact.

Positive symptoms are almost wanting. The diagnosis is reached by a careful process of exclusion. The cases are non-febrile in the typical state, but this may of course be altered by the development of an attack of strangulation. Further, to put it shortly, however hopeless the case may seem, and however long the symptoms may have lasted, the subjective symptoms predominate, the whole clinical picture is one rather of severe suffering than that of marasmus.

Regions of special sensitiveness and of special localisation of pain, irregular distension of parts of the bowel may exist, and suggest an explanation of the kind under consideration.—(*Langenbeck's Archiv.*, xlv, Hft. 1.)

The Radical Cure of Hernia. Kocher.—Professor Kocher reports on the results of his operations in the four and a half years up to June, 1891.

Of 94 cases on which late reports were obtainable, recurrence had taken place in 20. This is a higher percentage of failures than in the author's previous series. As explaining this fact, he points out that (1) since the date of his last report he has extended the application of the operation to a much larger number of cases—in fact, practically no case has been considered inoperable. (2) In nine of the cases which relapsed, the operation for radical cure was incompletely carried out (for various reasons). (3) The complete disuse of a pad (on the ground of views advocated by Socin) was, he thinks, made too universally the rule. (4) The period of quietude required of the patients was entirely too short—viz., seven and a half days only of confinement to bed in the 89 per cent of cases which healed *per primam;* excluding, that is, the infected and suppurating cases, and those in which, on account of thrombosis, the healing process required a longer time.

Discussing this last condition, Kocher admits, with Macewen, that it is right and desirable that after a radical operation the patient lie six weeks in bed, and do not return to work until after eight weeks, after which his plea of want of room in the hospital, and want of time on the part of the patient, seems of questionable validity, even though he can say that even under these conditions a cure is effected in four-fifths of the cases. The short period is, on his own showing, not of universal applicability. The statement that within the period mentioned by Macewen there is time for a repetition of the operation, is open to two objections—first, that after an operation of the kind has failed it cannot, as a rule, be repeated under the same, or at least the typical conditions; and, secondly, that a second operation always means exposure for a second time to the risks of the operation *per se.*

Healing *per primam,* as may be supposed, is a *sine qua non* of success under Kocher's conditions. Accidents will occur, but the use of a drainage tube to obviate these is not permissible; it means the sacrifice of that early adhesion which is to initiate the process. Out of the author's 94 cases, suppuration occurred 8 times, and in the 5 cases in which suppuration was deep, recurrence took place.

Apart from the necessity for rigid asepsis, the first condition of success is complete removal (=obliteration?) of the hernial sac and its neck, so that not the slightest excavation of the peritoneum shall remain. The second essential is a thorough closing of the hernial canal. Here Kocher is at one with Risel, Czerny, and Lucas-Championnière, and is at variance with Socin. Kocher refers to the analogous case of hernias developing in the laparotomy scar after careful suture of the peritoneum.

As regards Macewen's procedure in the treatment of the sac, Kocher attributes its success, not to the formation of a tampon, but to the immobilising of the peritoneum. Of the second step in that operation, while recognising its value, he maintains that "the inguinal canal is by this means closed in its entire length, which is more important than the restoration of the oblique course of the canal which Macewen emphasised. In this endeavour to close the inguinal canal in its entire length, the spermatic cord is a very great obstacle—not so much in closing the external ring, but in closing the internal opening." The credit of having got over this difficulty belongs to Bassini.

Bassini lays open the inguinal canal in order to free the spermatic cord as high up as the place at which it passes into the abdominal wall. The spermatic cord is then lifted up with a hook, and the posterior wall of the inguinal canal from the internal ring to the pubic bone sewed in such a way that the fascia transversa is united with Poupart's ligament, and with the border of the rectus. The cord is then laid back on the suture line and the cut edges of the fascia of the external oblique again united over it. [No mention here of the conjoined tendon.—Ed.]

"The fascia transversa" (tranversalis), says Kocher, "appears simply as a thickening of the peritoneum. . . . An efficacious closing of the posterior inguinal ring by means of sutures is therefore out of the question. What must restore a true resistance is the firm union of the lower border of the internal oblique and transversalis muscles with Poupart's ligament, and on the other side especially, the tensely stretched fascia of the external oblique."

The most important thing in closing the opening of an inguinal hernia can be accomplished without employing the method of Bassini, in cutting open the canal. The spermatic cord is pushed back, and the sutures beginning deeply in the canal near the internal abdominal ring, are passed through the internal oblique and transversalis with their fasciæ, and through the tense separated fibres of the external oblique muscles.

Kocher describes finally a procedure which he has lately adopted, he believes with good results. The skin and superficial fascia are divided over the inguinal canal, and laterally outwards. At the anterior ring the intercolumnar fascia and other envelopes are divided, and the sac carefully cleaned and isolated, until it can be strongly drawn down and its pedicle exposed. The index finger of the left hand is now introduced into the inguinal canal, and externally to the posterior inguinal ring a small opening is made through the aponeurosis of the external oblique. A slender pair of artery forceps is passed through this opening, and through the lower muscular fibres of the internal oblique and transversalis muscles, following the index finger as it is withdrawn through the canal and out at the external ring. With these forceps the isolated sac is grasped, and drawn through the canal, and out through the narrow opening in its anterior wall. It is drawn out as much as possible, then energetically twisted and laid down over the situation of the canal and the external ring.

Deep sutures are now applied above the twisted sac, through aponeurosis of the external oblique, fibres of internal oblique and transversalis, through the hernial sac itself, and including the ligament of Poupart beneath.

A modification of the operation has been applied in the case of femoral hernia.

From an incidental remark, we understand that the author considers it essential to success that the sutures be of silk, with a view, it is to be presumed, to their greater persistence; upon which point the remark would seem apposite that there is a fallacy in the use of persistent sutures where these are inserted under a high amount of strain, for just in proportion to the strain the tissues will cut.

The article is a most interesting one—historically, anatomically, and statistically—on the operations at present in use. The author would seem to be convinced of the anatomical reasonableness of the operations of Macewen and Bassini, the former more especially, and he cites with satisfaction the admirable results that they have obtained. That his operation is less complicated than that of Bassini may perhaps be granted; that it is less complicated than Macewen's is by no means obvious. This, however, seems plain, that it is by no means so precise.—(*Annals of Surgery*, December, 1892.)

Reflexes in Hip-joint Disease. Dr. E. G. Brackett gives, in the *Boston Medical and Surgical Journal* for 31st March, 1892, the results of an investigation into the state of the knee tendon reflex in cases of hip-joint disease, especially as compared with cases of spinal caries. He finds this test is often a valuable one, particularly in cases where the question is between morbus coxæ and spinal caries at a low level—sometimes a difficult question to settle. The nature of the information gained may be gathered from the following table:—

HIP DISEASE (47 Cases).

Quiet cases, without spasm,	16	Reflex equal, 15; unequal, 1. Normal, 11; increased, 5.
,, with ,,	19	Equal, 3; unequal, 16. Normal, 6; increased, 13.
Irritable cases, with spasm,	12	Equal, 3; unequal, 9. Normal, 2; increased, 10.

SPINAL CARIES (21 Cases).

Quiet cases, without spasm,	6	Equal, 6. Normal, 5; increased, 1.
,, with ,,	14	Equal, 14. Normal, 12; increased, 2.
Irritable cases, with spasm,	1	Equal, 1. Normal, 1.

—D. M'P.

MATERIA MEDICA AND THERAPEUTICS.

By C. O. HAWTHORNE, M.B., C.M.

Cold Applications in the Treatment of Continued Fever.—In a paper on this subject, Dr. W. Soltau Fenwick reviews the results which have followed the employment of the "ice-cradle" combined with hot sponging, in 100 cases of enteric fever, and 153 cases of acute pneumonia. The "ice-cradle" is a mechanical arrangement by which a current of cool air is brought into immediate contact with the surface of the body. This is effected by ice, placed in small pails, which are suspended above the patient from the central bar of an iron surgical cradle. Its application may be maintained for many days; it is found to reduce the temperature several degrees, and also to maintain the reduction. It is intended to be used only in cases in which the temperature does not exceed 105° F. When the thermometer exceeds that reading, Dr. Fenwick considers recourse must be had either to the cold bath or the ice-pack. But he finds that in moderate pyrexia (105°) the temperature can be reduced about 1·5° to 3°, and maintained at the reduced point by means of the "ice-cradle." He insists upon the importance of attending carefully to the details governing its application, and these he sets forth fully in his paper. The mortality in the 100 cases of enteric fever was 6 per cent; and in 153 cases of pneumonia, 10·5 per cent.—(*Practitioner*, November, 1892.)

The Treatment of Alopecia and Alopecia Areata.—This subject was discussed by Professor A. H. Ohmann-Dumesnil in a paper read before the American Medical Association, June, 1892. He excludes from consideration senile alopecia, and alopecia of syphilitic origin; and in regard to alopecia areata is of opinion that some cases are neurotic and others parasitic, a view which he considers is supported by therapeutic results as well as by clinical and pathological observations. The differentiation of these two classes is to be made by a consideration of the history of the cases, and by a study of their objective features. He enumerates the differential diagnosis in his paper. In pre-senile alopecia the treatment advocated is the administration of strychnine sulphate ($\frac{1}{60}$ gr.), reduced iron (1 gr.), and quinine bisulphate (1 gr.) in the form of a pill twice daily, or, when there are signs of "nerve-starvation," syrup of the hypophosphites with strychnine sulphate. In some cases this was supplemented by pilocarpine hydrochlorate ($\frac{1}{8}$ to $\frac{1}{6}$ gr.) at bed time. The improvement in several cases was most marked.

In the parasitic form of alopecia, Dr. Dumesnil has also been highly successful, a result he attributes to the energy of his treatment. He orders the hair to be cut short, and, with a view to prevent new infection, applies to the entire scalp a solution of mercuric chloride (1 in 750), or a 3 per cent solution of creolin if there appears to be any probability of mercurial poisoning. Then the affected areas are rubbed for five minutes with sapo viridis, gently scrubbed, and a small quantity of a lanoline ointment containing mercuric chloride (1 gr. to the ounce) applied. This process is repeated twice daily, or less frequently if deemed advisable.

For alopecia areata of neurotic origin, the internal use of the remedies recommended in pre-senile alopecia is advocated. These are to be combined with the local application of pure carbolic acid. The area involved is freely swabbed with this twice a week. It is claimed that the treatment, whilst rather painful, is decidedly efficacious.—(*Practitioner*, September, 1892.)

In the *Annales de Dermatologie et Syphilographie*, Busquet reports 80 cases of alopecia treated by local applications of oil of cinnamon (10 parts) with sulphuric ether (30 parts). This is painted on the affected surface once a day. The hair is cut short, and all washing of the scalp is forbidden. Some extremely obstinate cases rapidly recovered. The average duration of treatment was from three to four weeks.

Taraxacum in Liver Disease.—Mr. Jonathan Hutchinson is of opinion that this drug has a similar influence on the liver to that exerted by mercury, and that its efficiency is much increased by combination with nux vomica. He considers that it is usually given in too small doses. He quotes from his own experience a case of a boy, 10 years of age, who suffered from cirrhosis of the liver, and who was regarded as unlikely to recover. Under the influence of taraxacum juice (½ a drachm) with tincture of nux vomica (5 minims), given thrice daily, and continued for "a year or two," the patient got perfectly well. The patient is now 29 years of age and in tolerable health, but continues to take the medicine whenever "his liver is out of order." Mr. Hutchinson also refers to a case of acute xanthelasma with sick headaches, in which the administration of full doses of taraxacum was followed by marked benefit.—(*Archives of Surgery*, November, 1892.)

Antiseptic Treatment of Pernicious Anæmia.—In a paper read before the Edinburgh Medico-Chirurgical Society on this subject, Dr. G. A. Gibson referred to a case in a man of 55, who had been long resident abroad, and in whose family there was a highly neurotic strain. The patient also had a calculus in the right kidney, and had suffered from paroxysmal hæmaglobinuria. The skin was of a lemon-yellow colour, there was œdema of the lower extremities, and the red corpuscles were down to 800,000. Various abnormal forms of corpuscles were also present. Arsenic was tried, but produced severe gastro-intestinal irritation. Iron was useless. Transfusion was tried on one occasion, but only produced temporary improvement. The patient was then put upon peptonised food and 2 grains of β-naphthol (in pilular form) thrice daily. There was rapid improvement, increase in weight, and advance of the red corpuscles to 2,320,000. Dr. Gibson had found similar treatment of value in cases of simple anæmia. In discussing this paper, Dr. Foulis expressed the opinion that pernicious anæmia was a disease of the liver, and was attended with absence of the hepatic secretions. This was shown, he contended, by the character of the stools, and especially by their "visible and tangible stench."

Dr. Keppie Paterson had found β-naphthol of service in two cases of enteric fever in children.—(*British Medical Journal*, 16th July, 1892.)

Can Enemeta be Vomited?—In the Bradshaw lecture on "The Signs of Acute Peritoneal Diseases," Dr. Samuel Gee, in referring to the mechanism of fæcal vomiting, stated that in his opinion there was no evidence of inverted peristaltic movement. He added, "If enemeta ever become emetic, as Sydenham says they do, it can only be by absorption into the circulating blood, just as vomit may smell of turpentine after the use of that drug as a clyster." Dr. Saunby brings forward a case which he considers disproves this view. The case was that of a young man undergoing amputation at the hip-joint, and anæsthetised by ether. The patient, during the operation, continued to vomit a quantity of bile-stained mucus. After disarticulation had been performed, the operation was suspended to allow the administration of an enema of hot milk and brandy. The act of vomiting continued, and the ejected matter contained uncurdled milk. It seems impossible to doubt that this was the milk administered *per rectum*.

Practically the same question is raised by Dr. Sansom in a paper on "The Pathology and Treatment of Cholera." He considers it undeniable that fluid injected into the rectum may pass through the ileo-cæcal valve. In this connection he refers to the experience of Dr. Andrew H. Smith, of New York, who administered to a moribund patient an enema of defibrinated ox blood, and found on *post-mortem* examination that the mucous surface of the small intestine was for a considerable distance above the valve evenly lined with a layer of the deeply coloured fluid.—(*British Medical Journal*, 12th and 19th November, 1892; *Practitioner*, November, 1892.)

The Electro-Magnetic Current as an Antidote to Strychnine. By James Mackenzie, F.S.A.—The author records a case of strychnine poisoning of a Dandy Dinmont terrier overcome by the application of the electro-magnetic current. The animal had swallowed fully one grain of the alkaloid, and rigidity of the muscles and marked sensitiveness to reflex stimulation were evident. One pole was placed over the back of the neck, and the other on the rump. Immediate benefit followed, but it was necessary to maintain the current for four hours. A series of experiments gave similar results. The author considers that, as the dog is particularly sensitive to strychnine, it may be reasonably concluded that similar treatment would probably show the same results in the human subject.—(*Pharmaceutical Journal*, 3rd September, 1892.)

The Solution of Renal Calculi.—Mr. Reginald Harrison has for a number of years been in the habit of treating cases of renal calculus not admitting of operation by the administration of dilute solutions of boracite (pulv. magnes. et boro-citratis). He gives a teaspoonful of the powder in a half pint of hot water on rising, and repeats the dose in the afternoon. He has in his possession many specimens of eroded calculi passed by patients when on this treatment.—(*The Clinical Journal*, 7th December, 1892.)

DISEASES OF THE EYE.

By FREELAND FERGUS, M.D.

The Relation of Convergence to Accommodation and its Practical Bearing.—This paper by A. S. Percival, published in the *Ophthalmic Review*, betokens a great amount of patient research on the part of the author, and is, in our opinion, an important and lucid contribution to a difficult, and yet necessary, portion of ophthalmic practice.

The first two paragraphs, which we take the liberty of reproducing, sufficiently show the aim of the author:—

"Every ophthalmic surgeon occasionally meets with cases of asthenopia, the symptoms of which are not relieved by the correction of the error of refraction alone. These patients have a tendency to drift from one oculist to another, and at each visit some trifling modification is made to their prescription. . . . Finally, in despair, they abandon the spectacles, which they cannot wear with comfort, and seek relief in the last new drug advertised to cure headaches.

"Such patients are commonly neurotic. . . . Does their asthenopia depend on their constitutional condition, or is it due to some local cause? I believe it to depend on both factors—*i. e.*, that a local condition which would be quite insufficient to give rise to more than a passing discomfort in a patient of more static equilibrium will cause extreme distress in these subjects."

Dr. Percival then calls attention to a case in which there was 6 D of H; a nearly full correction gave the patient a divergent squint. This he believed, and we think correctly, to be comparable to the cases of myopia which acquire a divergent squint in order to keep the accommodation relaxed. Most persons when their ametropia is corrected are able to readjust the functions of convergence and of accommodation to the new conditions; a few are not, and therefore continue to suffer from asthenopia.

From all this it appears that we must not be content merely with the exact correction of refraction errors, but we must also see that for any given amount of convergence the patient has a good working range of accommodation; and, conversely, that for any degree of accommodation he has a proper range of convergence. To quote again from Mr. Percival's paper:—"The position I take is that, if the relation between the two functions is unfitted for present requirements, and if there is no sufficient faculty of adaptation, we should make the glasses suit the patient, instead of vainly attempting to make the patient suit the glasses."

As to the fitting of such patients with glasses, some very important observations are made. These are rather too technical to be inserted in this journal, but, of course, will no doubt be mastered by all engaged in ophthalmic work.

We observe that, although Mr. Percival has adopted the metric angle, yet he still numbers prisms in degrees; he does not say whether these degrees are degrees of effect or of inclination. It would, perhaps, have been better had he adopted the prism dioptre, which we think is quite as certain to be the universal standard of prisms as the dioptre is of spherical lenses.

In our opinion a great service would be rendered to ophthalmology were Mr. Percival to republish this and the paper which appeared in *Knapp's Archives* in one volume, handy for reference. Were he doing so, it would also be well to give full descriptions of the methods of making measurements; which methods, we fear, are not sufficiently well known, even by some who profess themselves to be ophthalmic surgeons.

Leuco-Sarcoma of the Choroid. Lagrange.—The first case was that of a child, aged 4, with eye increased to the size of a walnut. The eye was enucleated, and the eye examined. The tumour was found to involve the membranes, and to have been developed between the sclerotic and the retina. It also extended up the sheath, and the elements being infiltrated into the sheath caused the lamina cribrosa to become thickened, and the nerve itself to be disorganised.

Histological examination was directed to the tumour itself, to its relations with the membranes of the eye, and to the state of the optic nerve. The tumour was found to consist of numerous small round cells with an intrafibrillar connective tissue. There was no pigment, and the connective tissue was in some places quite thick, but in others could scarcely be said to exist.

Although the eye was so large and the cornea staphylomatous, yet the tumour itself only occupied about the size of a small nut in the contents of the eye. The tumour grew from the choroid. Lagrange believes that it originated in the supra-choroidea. He holds this because of the early involvement of the vaginal space of the optic nerve, and from the fact that the pigmented zone of the choroid was pushed forward with the retina by the neoplasm. The retina was nowhere to be seen—a fact due to the infiltration of cells. The tumour shortly returned, and was fatal. Lagrange says that the tumour is a white embryonic sarcoma, for it has the embryonic fusiform cells, but that it has been growing for some time, as there were such numerous round cells, and because degeneration of the retina and of the vitreous is secondary.

Another case--of a child in which there was a considerable tumour in the orbit, as well as one in the eye itself. This orbital tumour Lagrange believes to have been secondary to that in the eye, and to have formed from an infection in the vaginal sheath of the optic nerve. There was a band of tumour through the sheath connecting the two, but the sclerotic itself was perfectly healthy. The retina was thrown forward. The tumour apparently grew from the choroid.

As regards etiology, the leuco-sarcomata cannot be said to be due to accidents or to inflammatory mischief; when they appear to be so, they no doubt first existed, and the inflammation was only a symptom. They are primary tumours, and do not occur as secondary to disease elsewhere. In this respect they differ from carcinomata.

Anatomy.—These tumours consist of round and fusiform cells, although exceptionally we find tumours consisting exclusively of either the one or the other. In certain very malignant forms they assume an alveolar arrangement, very like the alveolar cancer. These latter are always metastatic. An alveolar carcinoma in the sclerotic and a white sarcoma in the choroid are very difficult to distinguish from each other histologically, but the carcinomata are always secondary to a primary growth elsewhere. The white fibro-sarcomata Lagrange regards as merely the same disease in a more advanced condition. Sometimes these tumours undergo degeneration, but never fatty, for they always stain with carmine. A difficulty of diagnosis occurs if the tumour is infiltrated with pus, and sometimes purulent inflammation of the choroid is apt to be mistaken for leuco-sarcoma. In the form of leuco-sarcoma with fusiform cells we sometimes find osseous tissue in the choroid.

Seat of Leuco-Sarcoma.—Knapp believes them to spring from the chorio-capillary. Lagrange thinks that they come from the most superficial layer of the choroid. Although that region is pigmented, the absence of pigment presents no difficulty, for tumours occur in the iris and ciliary body without pigment.

Leuco-sarcoma develops oftener in the anterior parts of the eye than melanotic. The most characteristic sign is a peculiar vascularity seen by the ophthalmoscope.

Leuco-sarcoma is differentiated from glioma by localisation of the latter in the retina; by the integrity of the other structures of the eye in glioma. In leuco-sarcoma there is a special network of vessels, and there is rapid invasion of the vitreous.

Lagrange gives a full account of the means of differential diagnosis, specially recommending Lange's lamp.

Books, Pamphlets, &c., Received.

A Dictionary of Psychological Medicine, edited by D. Hack Tuke, M.D., LL.D. Two Volumes. London: J. & A. Churchill. 1892.

Letts's Medical Diary for the Year 1893. Cassell & Co.

La Pratique Gynécologique et Obstétricale des Hôpitaux de Paris, par le Prof. Paul Lefert. Paris: J. B. Baillière et Fils. 1893.

Real Cooking, by "Grid." London: T. Fisher Unwin. 1893.

Catechism Series: Chemistry. Part II: Inorganic and Organic. Edinburgh: E. & S. Livingstone.

On Peripheral Neuritis, a Treatise, by Jas. Ross, M.D., LL.D., and Judson S. Bury, M.D. With Illustrations. London: Charles Griffin & Co. 1893.

Vaccination Eruptions, Original Research, by Thos. Dobson Poole, M.D. Edinburgh: E. & S. Livingstone. 1893.

The Diseases and Deformities of the Fœtus, by J. W. Ballantyne, M.D. With Plates and other Illustrations. Vol. I. Edinburgh: Oliver & Boyd. 1893.

The Hygiene of the Ear, by Dr. Vincenzo Cozzolino. Translated from the Fifth Italian Edition by James Erskine, M.A., M.B., Glasgow. London: Baillière, Tindall & Cox. 1892.

Symptoms and Clinical Signs: a Formulary for Clinical Note-taking. By Wm. Ewart, M.D. London: Baillière, Tindall & Cox. 1892.

A Manual of Practical Medical Electricity, by Dawson Turner, B.A., M.D. London: Baillière, Tindall & Cox. 1893.

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ORIGINAL ARTICLES.

ON A CASE OF SENSORY APHASIA OR WORD DEAFNESS, WITH THE CLINICAL AND PATHOLOGICAL RECORD; WITH A CASE OF FUNCTIONAL AUDITORY AMNESIA.

By DONALD FRASER, M.D.,

Medical Officer, Paisley Burgh Asylum; Physician, Paisley Infirmary.

My reasons for publishing this at length are the interest of the subject and the completeness of this case.

John K., æt. about 60, a labourer and married, was admitted to the City Parish Asylum, Glasgow, on the 15th November, 1877, but removed to the Paisley Burgh Asylum on the 12th January, 1878, where he was under my observation until his death nine years afterwards.

He came to us with no history beyond what was contained in the usual transfer certificate, in which his mental condition was described as weak and excitable, and further that he was dangerous to others. It was ultimately found that he was suffering from aphasia, and that, while irritable, excitable, and somewhat emotional, he was not dangerous to others, and that his mental condition was largely influenced by this speech-defect. He was really unusually quick and intelligent for his station in life.

He had had, so far as I could ascertain, a paralytic attack in 1870. My information as to the exact nature of this attack was defective; but, judging from a very graphic pantomime which he made, when questioned, by signs, and otherwise, it had been right-sided hemiplegia, of which at that time the only remaining trace was the aphasic condition for which his case is now reported. His physical condition was rather poor. He was subject to bronchitic attacks in winter. He was a wiry active man, with atheromatous vessels and a pulse of high tension. There was no trace of paralysis of the muscles of tongue or lips, nor of the muscles of the limbs; sight and hearing were good.

Before his illness he was a wild drunken fellow, often in brawls, and often lodging in police cells, yet a bit of a character, and rather a favourite in the part of the town in which he lived. It was not easy to determine exactly the extent of his speech defects. He got so excited when he attempted to make his wants, or more usually his grievances understood, that his speech, defective to begin with, became quite incoherent. I seldom heard any spontaneous speech from him beyond such appeals to me as, "Will I get hame, doctor?" At one time I asked a very careful attendant, under whose charge he had been for some time, to note down his phrases and speech so far as he could make them out. A specimen or two will be enough. "Doctor's coming to-morrow. I'll get hame anyway—dampt sure of it!" "Keep me here till dead, be dampt!" Then would come a string of short phrases composed chiefly of oaths at the doctor for keeping him in the asylum. Most of his talk referred to his detention in the asylum, with excited references to the sheriff, to his various imprisonments, to his son Johnnie, to his wife, and to incidents in his past life, given in a disjointed fashion, and, when going beyond a sentence or so, imperfectly articulated, and generally ending in what has been not inaptly termed, "a mere broth of unintelligible syllables." One of the most complete phrases preserved in the above manner was, "Och, och, doctor! never get hame till dead. If the doctor get me hame, come every week to see you, bring whisky to you, no much onyway." I may say that he often eked out his speech by animated gesture or pantomime, at the latter of which he was very good. His articulation became more defective when he got excited, or when he had to pronounce a long or in any way difficult word. Thus, he very often spoke of the sheriff as the "shiriffs" or the "shiffus." When asked to point out the letters of the alphabet, he could generally do it, but failed to name them correctly. When asked to point out R he did so, but called it F. H he pointed out, but called it E, nor could he be got to name them correctly when named for him, with the exception of X or Z, which he named correctly. When shown common things, such as a knife, a glass, soap, and the like he indicated by pantomime that he knew their use, but failed to name them even when their names were slowly and distinctly uttered in his hearing; but when the written symbol of one of these objects was shown to him, he at once either named it correctly, or used a word having a more or less close phonetic resemblance to it.

It was doubtful if he always understood ordinary commands, if no indication were given by gesture of what was wanted of him, though when asked to do such things as he was in the habit of doing frequently, he would generally do them. He could name some objects very familiar to him. He seemed able to translate most written into spoken words when they were not very complex, but the more syllables the more inexact was the pronunciation, and the more obvious the effort in articulating them. Though he was an illiterate man, he could slowly, and with effort, write his name when asked to do it. He could also understand what he read, though he never read, so far as I remember, but when something was put before him for purposes of examination.

Throughout the nine years he was under observation he was often examined by myself and others, amongst whom were Professor Gairdner and Dr. Finlayson of Glasgow. He was also brought before a meeting of the Glasgow Pathological and Clinical Society.

I have notes of an examination of his aphasia which I made on 27th July, 1883, which I give here as illustrative of what I have said above.

As he entered the room, I said, "Nice morning, John," to which he replied, "Good day." I then said, "Very hot." "Good day it is." "What is your age?" "The year I was born, 65." "What is your name?" to which he answered, "Where I was stopping." After many attempts he seemed to understand what was required, and answered, "John." Showing him my purse, he called it "foke," and attempted something like "petz" when the name was pronounced very distinctly in his hearing; but when the written symbol was printed, or written in large letters, he at once, with emphasis and evident recognition, said, "Purse." Very often, when testing him with this particular article, and when, after seeing its written symbol, he had pronounced it correctly, I would pass on to something else, to find immediately afterwards, on showing it to him again, that he was unable to name it until its written symbol was shown to him. He was next shown a boot-lace, and named it "turl," but after printing it for him, he said "lass:" putting it aside for about half a minute, and then showing it to him, he calls it "rest," but the written symbol at once brings forth "lass." On my taking up a pen, and repeating its name again and again to him, he called it "petste," when written at once, "pin," and thirty seconds afterwards was able to name it. A match he named correctly. Shown a bottle of ink, he said, "I know it—key;" when the written name was shown he called it "inking." An umbrella he called "paristu," and indicated by pantomime its use, but named it correctly when shown the written word. A number of other familiar articles were shown to him, such as slippers, brush, stick, shovel, with the results, as above, that only when shown their written symbols could he name them. Occasionally, when testing him in this way, he would say, "I know it," and, when unable to name it, in tones of distress, "Canna speak at all."

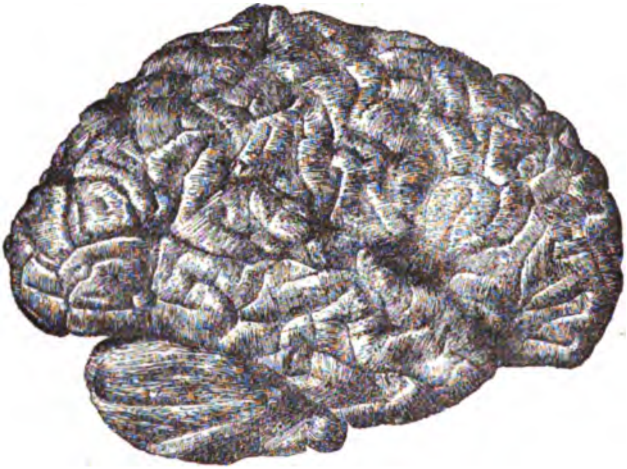
I next put a number of pieces of wool of different colours before him. I asked him to pick out blue; he did not understand me. Green he picked out at once, brown he also picked out, and when it was pointed to, he named it correctly. Yellow he named "young," blue "black," but green correctly at once. On pointing to Dr. M'Gregor, the then assistant medical officer, and asking his name, he said, laughing loudly at the same time, "Rob Roy." This answer, with its play upon the name M'Gregor, was as unexpected as it was surprising. A test which I often applied to him was to take one of the sheets of Scripture texts which hung in the ward, and ask him to read it. On this occasion I did this, and here reproduce, as nearly as I can, his reading of a text:—"Jesus sad," here he made the sign of the cross, "no man havin' putt his hand to the prough and laughing back is fit for the kingman of God." I then turned him away from the sheet, and read the same words slowly and distinctly, when, with all seriousness, and as though there were nothing wrong with his speech, he repeated after me jargon which had not even the faintest phonetic likeness to the words as pronounced by me.

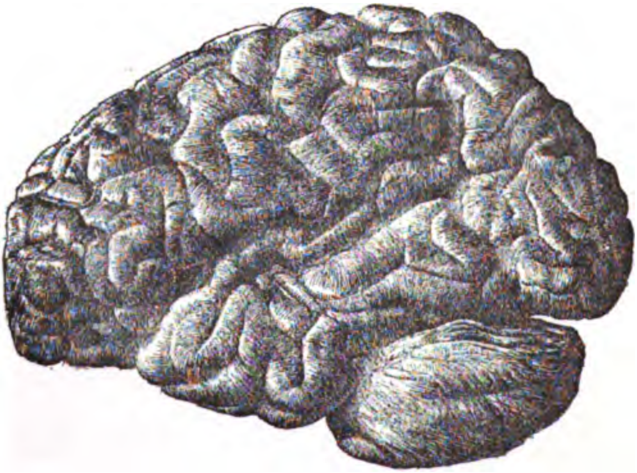
When I put all the articles above referred to on a table before him, and asked him to point out brush, slippers, pen, stick, &c., naming them very distinctly, most of them were picked out by him as I named them, and while he may have obtained some clue from the direction of my eyes, I was satisfied that the names of some familiar objects and certain familiar words originated, faintly at least, auditory images. While he appeared generally to guess the drift of a question from the connection in which it had been asked, as on printing for him the question, "What is your age," he would reply correctly, but on repeating the same words immediately afterwards, he would answer, "John." Yet at times he appeared to understand what was said to him, or more probably understood a word or so, and guessed the rest. Thus, on one occasion, when in his usual fashion pleading with me to "get hame" to his wife, I said to him, not expecting him to underme, "But, John, you have no home; your wife is a beggar," which was a fact, I was both surprised and vexed to see him turn away suddenly with tears in his eyes, repeating to himself something like "och ! och ! a beggar." Now, here it is possible that the movements of my lips in articulating a word like beggar would give him enough, from which, with his knowledge of his wife's habits, to gather my meaning. Yet, on the other hand, we knew from one of his phrases, "Ill beg pennies on the street or I stop here," that he had the use of the word beg. Indeed, considering the duration of his case, the wonder is that he did not understand more spoken words than he did.

A speech of his on one occasion was, "C—— is good man to me, Tam, too, both good to me," the reference being no doubt to pecuniary help obtained from two well known and very popular citizens, brothers, noted for their liberality. One of these gentlemen went through the asylum with me on one occasion, when he was at once recognised by John, who, when he saw him, came up to him calling out very excitedly, and with expressions of delight, "Tam," followed by an incoherent stream of excited talk. This gentleman was often called by old residents in the district in which he lived by his full Christian name, but seldom or never by the familiar diminutive which John's emotions suddenly liberated, though the continuance of the emotional excitement led, as it always did, to complete unintelligibility.

John, who had always been subject to attacks of bronchitis, and who suffered latterly from a dilated heart, died from an acute attack on the 22nd April, 1887.

A *post-mortem* examination was made on the 24th. The brain having been carefully removed, it was examined with the assistance of Dr. Joseph Coats, Pathologist to Western Infirmary. On inspecting the lateral aspect of the left hemisphere, it was at once noticed that a marked depression existed near the posterior extremity of the fissure of Sylvius. The fissure of Sylvius and the first temporo-sphenoidal sulcus having been opened up, it was seen, comparing this side with





the other, that there was a very distinct atrophy involving the posterior part of the superior temporo-sphenoidal convolution, and the posterior part of the inferior parietal lobule. No other lesion was observed, and beyond careful separation of the hemispheres, no sections were made with a view to preserve the above mentioned conditions. I caused a number of photographs of the brain to be taken, and employed a good artist to make a careful drawing of the hemispheres. The result is seen in the accompanying plates, where the atrophy of the left auditory centre is well shown; the accuracy of the drawing must be evident to those members of the Glasgow Pathological Society who examined the brain. The depression shown of the posterior part of the parietal lobule is marked, though scarcely so marked as it was in reality.

We had here, then, what from the clinical conditions we expected to find, a marked lesion of the left auditory centre, and restricted entirely to that centre, and in view of the pathological evidence of such a lesion, I have thought it right to give the clinical history of this case so fully as I have done. This patient did not come under observation until at least eight years after the paralytic attack which ushered in his speech disorder, and most of the observations above recorded were made nearly fifteen years thereafter. Yet the speech-disturbance, which at first must have been very profound, persisted in the marked manner above described throughout all this period. Considering his age and surroundings, anything like re-education, to any extent at least, was not to be expected. The motor speech difficulty or paraphasia, once its sensory origin was recognised, became easy to analyse. When, for instance, he called a purse "foke," he was evidently aiming at poke, not a bad synonym for the word wanted. When he named a pen "petste," he was striving after pencil. When he called an umbrella "paristu," he had in his mind parasol. He could not recall the assistant medical officer's name, but got at it by a periphrasis which tickled himself, the association between Rob Roy and M'Gregor being a very close and familiar one in Scotland. And when his speech became almost jargon, it was because, as it is very well put by Gowers,* "as auditory processes are the first to be developed in the child, so they continue the most important through life. If they are lost the patient is thrown on his motor memory, and it often misleads," and here it misled thoroughly, his "word deafness" being very complete, for, as we have seen above, very rarely indeed could he repeat words uttered to him, even though they were the names of familiar objects. Ross † says "a half educated person can only comprehend what he reads when the words, as uttered by himself, fall upon his ear, and it is manifest that in such a person word deafness would entail almost complete word blindness. Now, here we had an illiterate man, whose power to read at all was a surprise to me, in whom word deafness had no such effect. The connection between the written word and its corresponding idea had been so well organised that it was evidently effected very directly in his case.

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* *Disease of the Nervous System*, vol. ii, p. 110.

† *On Aphasia*, p. 78.

In connection with such a clinical history as the above, I have considered it unnecessary to enter into a discussion of sensory aphasia in a general way; but in contrast to a case like this, of more or less destruction of the centre for auditory images—organic amnesia—I may be excused for giving a sketch of a case, to me unique, of functional amnesia or dysmnesia, if it can be really classed as organic-functional.

H. M., of fair, if not good intelligence, who, in spite of years of school and other teaching, has not been able to learn to read because of what I may term, for want of a more exact definition, congenital word deafness. He was 13 years of age, and employed in a factory, when he first came under my observation on account of his having no educational qualification as required by the Factory Acts. The statement about him which arrested my attention was, that though he had been years at school he could not be taught to read, a puzzling statement in view of the fact vouched for by his employer, that he was one of the smartest boys of several employed by him, and certainly, so far as I could judge, he was an active looking boy of normal intelligence. As an illustration of his quickness of apprehension, his employer informed me that goods from many manufacturing houses were received and accompanied by corresponding pass books, and that this boy would, when requested to bring the book of a particular firm from a pile of such books, pick it out at once, many of them in appearance differing only in the names written on the covers. Before his employment in this factory he had been four or five years in a Board School, the master of which told me that he could not teach him to read, and could not understand why. I also learned that he had been at school for a year or two before that in another part of the country. His father, a workman of more than average intelligence, informed me that he had tried to teach him in the evenings, but failed, though he admitted that he lost patience with him. He had, however, taught him to write his name, which he wrote for me in a fair round boyish hand. Knowing that he had special difficulty with the letter "d," which was the terminal letter of his name, I placed my hand over what he had written save the "d," which he failed to name.

He is now 24 years of age, earning good wages at a textile trade, which, though it does not rank as a highly skilled one, yet requires smartness and intelligence. He is still unable to read, though a slight improvement has taken place on the condition in which I first found him. He is sensitive as to his defects, and conceals his ignorance, so that when he receives any written order or directions as to the finishing of certain goods, he gets at the meaning of the directions through the appearance of the documents, and the information extracted from his fellow workmen who happen to be employed at the same class of goods.

To save unnecessary detail, I will now, as briefly as possible, give the results of my various examinations and experience in connection with his case.

My first impression was that his difficulty was a visual one, but further examination showed that his perception of form and colour was very good. He can spell most words, though seldom one of more than two syllables without a mistake. His chief difficulty is with "b," "d," "p," and "q."* He can read some monosyllabic words. Thus, with the word "Campbell," printed in large letters before him, I find that he does not know it. On covering the first half of the word he is able to tell me that the second half is "bell," but he fails with the first half, and after I have told him what it is, and that the whole word is the familiar name "Campbell," he still fails. His ordinary speech is fluent, and as copious and correct as that of the vernacular of his age and class, and was acquired at the usual age in the usual automatic way. But when telling any incident he has seen, or reporting what he has heard at a concert or meeting, unusual or long words are generally mispronounced. "Abercorn," for instance, is the name of a well known football club, of a public hall, and of a street in this town, yet he will call it "Abiecorn," though in doing so he has dropped the, to normal ears, easily discriminated "r." I tried him with words very unfamiliar to him, such as "osteotomy" and "anatomy," which he repeated after me quite correctly, but immediately afterwards called them "mestotomy" and "anamity." In contrast to this difficulty with articulate sound, his memory for musical sounds is good. He is fond of music, and sings fairly well, but the word "wold," occurring in one of his songs, he will call "wood;" even the familiar "Scots wha hae" becomes "Scots ma hae." To some extent still he has special difficulties with the labials and dentals. When I first examined him he was specially incapable of discriminating between "b" and "d," which, as continuous vowel sounds, is not in the circumstances surprising. Bain* refers to our discrimination of the various articulate sounds being due to the variety of effect produced by them, and says, "We can understand how each should produce a different kind of shock to the nerve of hearing." It is possible that this may be the clue to H. M.'s condition. We can only say, however, that his auditory images are defective; the condition might be termed auditory amnesia, for he has the images, but cannot retain a certain proportion of them beyond a few seconds, though long enough for immediate articulating purposes, but the defect comes out, not so much in the more deeply organised associations between the auditory and articulating centres, as in the attempt to establish associations between arbitrary signs, such as printed words, and the idea represented by the auditory image of the word.

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* May it not be from some auditory defect that certain uncultured races, as the Hurons, are said to be unable to pronounce the labials? See Laycock, *On Some Organic Laws of Personal and Ancestral Memory.*

There is no history or any evidence of any kind in this case that the defect is the result of any illness, though his mother insists that he was never the same after an attack of measles. In regard to heredity, I am informed there was a paternal uncle who, an exception to the rest of the family, read and wrote badly, and learned to do so with great difficulty, but much cannot be made of this.

Since the publication of Galton's *Inquiries into Human Faculty*, with its interesting exposition of the great variations in different persons of the capacity for visual or auditory images, it becomes easier to understand how, while a condition like this of H. M. must be very rare, we may yet expect, by careful investigation, to discover minor degrees of it, very likely amongst the so-called stupid children. The backward or nervous child at present, very much as the result of our system of payment by results, is the *bête noire* of his teacher, instead of being, as he should be; and as he, no doubt, will be to the scientific pedagogy of the future, a source of psychological interest, and with good results to himself, though not according to the Code.

Apropos of this, I have for long maintained that, while a judicious physiological use of the birch will help to correct bad spelling in many cases, yet there is a defective spelling which is the result of imperfect faculty, most likely of the visualising type.

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* *The Senses and the Intellect*, p. 202.

A case like this of H. M. ought, even yet, to be materially helped by careful training, and possibly such assistance as would be obtained through lip-reading.

CLINICAL MEMORANDA,

BEING SELECTED CASES FROM THE WARDS OF

DR. M'CALL ANDERSON,
Professor of Clinical Medicine in the University of Glasgow.

(REPORTED BY WM. R. JACK, M.B.)

I.

1. *Case of Pernicious Anæmia—Recovery Under Arsenic—Unusual Complication Terminating Fatally—Post-mortem Examination.*

A. M'D., æt. 17, was admitted to Ward VII, Western Infirmary, under the care of Professor M'Call Anderson, on 11th July, 1892.

Her family history is unimportant. The patient herself has always been very healthy until the commencement of the present illness. In the last two years she has grown very rapidly. The present illness began about eighteen months ago, when her relatives noticed that she was paler than usual, and she became languid, and lost strength. The pallor and weakness increased progressively. At first she had no other symptoms. Her appetite continued good, but after some time she felt an inordinate craving for oatmeal porridge and oatcakes, and she now has a similar craving for buttermilk. About eight months ago she became subject to attacks of faintness, which recurred about once a month. In November, 1891, owing to the steady progress of the disease, a doctor was called in, who prescribed Blaud's pills, and ordered a change to the country. Under this treatment she greatly improved, but became worse on her return home, and since then the symptoms have steadily progressed. She has not suffered from palpitation, nor does she complain of headache. Menstruation was regular until the beginning of June, but the period has not recurred since then. Her bowels were costive for a month before admission, but are now regular. During the last three weeks her appetite has been poor, but she has not lost flesh. For the last month she has suffered much from thirst, and has passed a somewhat excessive quantity of urine. As a rule she sleeps well, although she is slightly feverish in the evening.

The patient is excessively pale as regards both the skin and mucous membrane, and the skin has a somewhat sallow tint. The blood corpuscles, counted on 13th July, numbered only 1,230,000 per cmm. A systolic murmur is audible over the whole of the cardiac area, but is best heard in the vessels of the neck, where a faint venous hum can also be heard. The pulse rate is 120. The temperatures since admission have been as follows:—

	Morning.	Evening.		Morning.	Evening.
July 11,	101·4	101·6	July 16,	100·0	100·6
„ 12,	102·2	...	„ 17,	98·8	100·6
„ 13,	100·4	100·2	„ 18,	99·2	99·4
„ 14,	99·4	100·0	„ 19,	99·4	99·2
„ 15,	99·4	100·4	„ 20,	99·2	...

On the 19th she passed 60 oz. of urine; on the 20th 64 oz. On the 22nd the urine was very pale, of specific gravity 1013, and highly acid. It was also slightly turbid, and there was a large deposit of crystals of uric acid. There was no albumen.

On 1st August Dr. Hinshelwood examined the eyes, and found multiple retinal hæmorrhages in both, but especially in the left. There was also optic neuritis on this side.

The examination of the other organs was negative.

The treatment, begun on 11th July, consisted of frequent light feeding by day and night, and the patient was warned not to lift her head from the pillow. The following mixture was given:—

℞.—Liq. arsenicalis, ...	♏ xc.	
Fer. et ammon. citrat., . . .	gr. xvi.	
Tk. digitalis, ...	♏ xl.	
Glycerini, ...	℥ i.	
Aq., ... ad.	℥ viii.	M.

SIG.—Half an ounce every three hours.

On the 13th arsenic was administered, in addition, by hypodermic injection of 5 minims of Fowler's solution every day, and on the 27th the dose was increased to 10 minims. Under this treatment the patient improved very much in every way. There was a marked gain in colour and strength, and, after about a month, she was allowed to sit up in the evening. Menstruation, however, remained absent.

On 3rd September the blood corpuscles numbered 2,666,000 per cmm., being a gain of 1,436,000.

On 9th October the temperature which, but for one or two transitory elevations, had been very nearly normal, ran up in the evening to 102·2°. She complained of chill, and said she had a sore throat, but there was no other symptom, except a pain at the seat of the hypodermic injections in the thigh. These were therefore discontinued, but one spot remained painful, tender, somewhat indurated, and reddened, until 12th October.

On the 11th a careful examination of the lungs was made, and it was discovered that the breath sound under the left clavicle was slightly interrupted during inspiration. There was no dulness in front, and behind the lungs were normal. From this time loss of flesh went on very rapidly, and complaint was made of slight dysphagia.

On the 12th October the evening temperature reached 103°, and was only slightly reduced by 10 grains of quinine, and two doses of 15 grains of antipyrine. The patient died on 19th October, between two and three A.M., the temperature having ranged for the ten days before death between 102° and 104°.

Post-mortem.—The following conditions were discovered:—There was great emaciation. The heart was normal in size, but pale, with diminution of the external fat. The left lung was adherent at the apex, and its upper lobe was considerably occupied by an almost homogeneous, nearly white, and somewhat tough infiltration, in the midst of which a small cretaceous mass was present. Microscopically, the apex presented a dense mycotic infiltration. The spleen was greatly enlarged, measuring 7½ × 4½ inches. The kidneys were normal in size, and very pale. The stomach contained about 40 oz. of a deep green fluid, but there was nothing remarkable in the mucous membrane. The liver, which was normal in size, presented a slightly reddish colouration, and in it was found a single yellow tumour five-eighths of an inch in diameter, with distinctly demarcated boundaries. The œsophagus was coated with a yellow pale membrane, firmly adherent, and extending from near its upper to within an inch of its lower extremity. There was considerable enlargement of the glands around the cardiac orifice of the stomach, and towards the porta of the liver. Some of them showed rounded nodules in the cortical part. The liver did not present the accumulation of iron present in pernicious anæmia. The bone-marrow was not diffluent, but dark red. Under the microscope there was still some fat in the large drops seen in adipose tissue. Otherwise the tissue was very cellular, the cells being small and not like the large granular cells seen in pernicious anæmia. The right lung was non-adherent. Its lower lobe was somewhat condensed. In the main branches of this lobe there was a pale fibrinous cast extending to the bronchi of a small diameter.

Remarks by Dr. Anderson.—There can be no doubt that this patient, at the time of her admission, was suffering from a typical attack of pernicious anæmia, and the absence of the usual *post-mortem* appearances is satisfactorily accounted for by the fact that she had practically recovered from that disease some weeks before she was cut off by the subsequent ailment; nor can there be any question that the disappearance of the symptoms was due to the arsenical treatment.

The illness which terminated fatally was only of ten days' duration, having commenced on the 9th and terminated on the 19th October. The *post-mortem* appearances were most unusual and puzzling, but that poisoning of the blood resulted from the entrance of micro-organisms into the system seems almost certain.

2. *Case of Cancer of the Lung, complicated with Secondary Cancer of the Liver.*

A. M'Q., æt. 65, a rivetter by trade, was admitted to Ward II of the Western Infirmary, under the care of Professor M'Call Anderson, on 9th November, 1892, complaining of swelling of the feet, legs, and abdomen, of two months' duration.

He states that his father died at the age of 100, his mother at 90. He is the youngest of a family of four brothers and three sisters. All the rest are abroad, and he has no information about them.

He has been exceptionally healthy, never having been a day ill until the commencement of his present complaint. About three months ago he suffered from a pain in the left loin, which he describes as a "soreness." He attributes this to exposure, which he has frequently undergone. Two or three weeks afterwards his feet began to swell. The swelling increased for some time, and then remained stationary. It is always worst at night after his day's work, and less in the mornings. There was no swelling of the face until within the last two or three days, when there has been a little in the morning. About two months ago the abdomen began to swell, the enlargement commencing upon the left side. It increased in size, and a few days before admission he discovered that it felt like a hard lump. Within the same time it has been somewhat tender on pressure. For three weeks he has had shortness of breath, especially on going uphill. He states that he passed the usual quantity of urine before admission, but since then it has been scanty.

On physical examination, marked œdema of the lower extremities and swelling of the abdomen are found to be present. There is a great and irregular enlargement of the liver, the surface of which is nodulated and tender to pressure. The liver measures in the axillary line, 4½ in.; in the nipple line, 7½ in.; and in the middle line, 7¼ in. The vessels are atheromatous. A systolic murmur is present, loudest at the apex of the heart and in the aortic area, and the apex is displaced one inch to the left, and slightly downwards. On the right side of the chest, in front, there is marked dulness, extending to the lower edge of the fourth rib, and extending 1½ inch beyond the middle line. Over this area there are feeble breathing, and decreased vocal fremitus and resonance. Here, too, the systolic murmur is very distinctly heard. The veins in the neck and in both upper extremities are much distended. Examination of the urine gave the following results:—Quantity, 16 oz.; sp. gr., 1028; high colour; albumen absent; a few uric acid crystals. The temperatures are normal.

Dr. M'Call Anderson diagnosed the case as one of cancerous enlargement of the liver, and cancerous tumour of the right lung (leaving it undetermined which was the primary lesion), complicated with disease of the aortic valve, and perhaps also mitral incompetence.

The treatment consisted in frequent light feeding, regulation of the bowels, and stimulation.

The patient gradually grew weaker, and died on 26th November.

At the *post-mortem* the following conditions were discovered:—The heart was considerably enlarged, the enlargement affecting mainly the left ventricle. The aortic curtains were thickened, the left and anterior curtains being somewhat coalesced and infiltrated with lime. The water test revealed slight incompetence. The left lung was non-adherent, and showed hypostatic engorgement and œdema. The right lung was firmly adherent about its middle parts. At the lower parts of the upper lobe anteriorly there was a bulky condensation, consisting partly of a white tumour-tissue and partly of a grey condensation. The tumour-tissue bore a special relation to the bronchi, surrounding and incorporating the stem passing to the area concerned, and also extending along some of the principal branches in this part. The spleen and kidneys were somewhat enlarged, but presented nothing remarkable. The liver was enormously enlarged, weighing 198 oz. It was the seat of great multitudes of tumours, varying in size from mere white little molecules to two inches in diameter. The tumours were very soft in consistence. There was no tumour in the intestine. Those in the liver and lung were of a cancerous nature. The lung tumour, on microscopic examination, was found to be a scirrhous cancer. Dr. Coats regarded it as the primary lesion.

THREE CASES FROM THE WARDS OF THE GLASGOW ROYAL INFIRMARY.

By JOHN DOUGALL, M.D., F.F.P.S.G.,

Professor of Materia Medica, St. Mungo's College, Glasgow; Physician and Lecturer on Clinical Medicine, Glasgow Royal Infirmary.

I.—Ergot in Diabetes Mellitus.

T. Y., aged 21, blacksmith, was admitted to the Royal Infirmary on 10th March, 1892, complaining of great thirst, weakness, and polyuria. He is an only child. Father alive, but troubled with bronchitis. Mother died of kidney disease. Had scarlatina when a child, and jaundice when 12 years old; otherwise he has always been strong and healthy, has lived temperately, and is not aware of any cause for his illness. Five weeks ago he noticed that he was constantly thirsty and had an excessive appetite, and about two weeks after found himself getting very weak, when he consulted a doctor, who said he had diabetes. Patient looks fairly healthy, and is well nourished; weighs 8 st. 12 lb.; complexion a little sallow; skin harsh and dry; skin of legs tender to the touch; knee-jerk absent; appetite abnormally great; tongue clean; bowels regular; pulse 72, weak; temperature, 97° F.; heart normal. Over apex of right lung the percussion note is comparatively dull, and expiration a little prolonged. Over both lungs behind a few wheezing râles are heard. Specific gravity of urine 1035, acid, and contains 28½ grains of sugar per fluid ounce. During the first six days after admission the quantity of urine passed averaged 226 ounces per day, with a mean specific gravity of 1040. On one of these days the urine measured 310 ounces. The sugar passed daily was close on 15 ounces.

He was put on the following dietary:—*Breakfast.*—One pint tea with milk, no sugar, two eggs, gluten bread with butter. *Dinner.*—A dessert-spoonful of Valentine's beef juice in 4 ounces water, half pound steak with vegetables, gluten bread. *Supper.*—One pint tea with milk, no sugar, two eggs, gluten bread with butter. The only medicine given was half a fluid drachm ext. ergot liq. thrice daily; saccharine was tried to sweeten his tea, but it made him sick, and had to be stopped. In a week after admission his thirst was entirely gone, the quantity of urine had fallen to about 65 ounces daily, specific gravity unchanged, and patient said he felt quite well, but weak. On 28th March the sugar had fallen to 4½ grains per fluid ounce of urine. On 30th March he was hypnotised with some difficulty by Dr. Kingsbury, Blackpool, in the presence of Professor W. T. Gairdner and Dr. Yellowlees, Physician-Superintendent, Gartnavel Lunatic Asylum. While in the hypnotic state, suggestions were made to him that he would have no more thirst nor excessive hunger, would pass less water, would soon be well, &c. Next day, however, he passed 98 ounces of urine as against 70 ounces on the previous day. On 1st April I myself hypnotised him with comparative ease, making the usual suggestions, without benefit; and again, on 4th April, with the result that the urine, which measured 66 ounces on the previous day, rose to 98 ounces next day. I am not, however, inclined to think that the hypnotism caused the increased urine, although I did not expect it would lessen it. On 12th April the ergot was increased to one fluid drachm thrice daily; his weight was unaltered; sugar present ran about 13 grains per ounce, in about 60 ounces of urine passed daily, having an average specific gravity of 1035; hence the quantity of sugar now passing daily was reduced to 1¾ ounces.

On 13th May he had gained 6½ lbs. weight, and on 20th 8 lbs. On 27th the ergot was stopped to see whether any change would result in his condition, and on the 29th it was found that the sugar present had increased to 52·7 grains per ounce of urine, or 9·6 ounces of sugar per day. On 16th June he was put upon one and a half fluid drachms ergot thrice daily, which was continued until he left the hospital on 1st July, his condition then being as follows:—

STATE ON ADMISSION.	STATE ON LEAVING.
Weight, 8 stones 12 lbs.	Weight, 9 stones 2 lbs.
Very weak.	Much stronger.
Great thirst.	No thirst.
Much hunger.	Moderate appetite.
Urine, 226 ounces daily.	Urine, 64 ounces daily.
Sugar passed daily, 15 ounces.	Sugar passed daily, 4·9 ounces.
Skin harsh and dry.	Skin soft and moist.

The knee-jerk remained absent, and the dull percussion note of lung was still present. As the determination of the quantity of sugar takes a deal of time, my assistant could not do it so often as I wished, there being only thirteen records of the quantity, and at rather irregular intervals. Yet I think these records prove that ergot was undoubtedly inhibitive to the formation of sugar, to thirst, to the secretion of urine, and probably also to hunger, although the diet must to some extent have helped to cause these effects. It may be mentioned that patient was allowed buttermilk *ad lib* for a few days, but being found to contain sugar, and to cause diarrhœa, it was stopped.

I am at a loss to conceive how ergot *per se* is ranked among poisons, as I cannot find a single recorded case of fatal poisoning by it in its pure state. Of course, particulars of deadly epidemics of dry and spasmodic gangrene from eating ergotised grain were long ago published, but it has been strongly suspected, and with good reason, that the diseased grain, and not the ergot, was the cause. At any rate, I find that my patient had taken altogether 30 ounces and 6 drachms of the liquid extract of ergot, not only with no harm, but with obvious benefit. This quantity represents in the formula of the *British Pharmacopœia* for the preparation of the liquid, extract of ergot, the active principle of nearly 2 lbs. of ergot grains. When I began giving ergot in this case I was not aware that it had been used in diabetes mellitus before, although I had previously given it successfully in diabetes insipidus on the grounds of its contracting the capillary arteries, for which reason it was tried in the present case. I find, however, in the *Practitioner*, vol. xxv, 1880, a paper by J. W. Hunt, M.D., narrating two cases of diabetes mellitus treated by the liquid extract of ergot, in which he obtained results similar, or perhaps better than mine. He also refers to a paper by Dr. Pepper, of Philadelphia, in the *New York*

Medical Record, 10th July, 1880, in which ergot is advocated in diabetes mellitus, but chiefly to abate the polyuria.

As a further proof of the harmlessness of large doses of ergot, and which I have confirmed, Dr. Hunt says (*op. cit.*), "I have never seen in any case in which I have pushed the ergot even to 1 ounce of the liquid extract in the twenty-four hours, any interference with the circulation, such as can be made out either with the ophthalmoscope or by means of feeling the pulse, nor have any unpleasant symptoms declared themselves even when the treatment was long continued." Again, Wood, in his *Therapeutics* (*vide* "Ergot"), says—"The fluid extract closely represents the drug drachm for drachm. In congestion of the spinal cord I usually commence with half an ounce and increase to an ounce three times a day." Surely these facts show that ergot is anything but a poison.

II.—BINIODIDE OF MERCURY IN TRAUMATIC ECLAMPSIA.

J. M'D., æt. 11 years, was placed under my care in the Royal Infirmary on 29th February, 1892, suffering from epileptiform convulsions of six years' duration. Family history unimportant—in particular, no hereditary epilepsy. Patient was always healthy until he was five years old, when he had a fall on the back of his head, which caused considerable bruising, and left a cicatrix about one inch by a quarter inch, upon which the hair has not grown. Six weeks after the fall he began to take faintish turns, accompanied by a feeling of sickness. These continued some weeks, occurring two or three times daily, and latterly developed into convulsions, which gradually increased in severity and frequency. About three years ago he had an interval of fifteen months without any fits, when he began to study the alphabet, and the fits soon after returned, and have been increasing in frequency since, but are said by his father to be less severe than formerly.

Patient looks healthy, although a little pale; he is active and intelligent. The heart, lungs, temperature, and urine are normal. His right arm and leg are partially paralysed, and the right foot is slightly dragged when he walks; eyes, reflexes, and speech normal. Since he turned ill he has had a large quantity of bromide of potassium, without apparent benefit. He takes fully twenty fits in the twenty-four hours. Just before a fit he can tell that it is coming, by a dimness advancing over his eyes. This is the only aura. He raises himself stiffly, but does not scream, then turns on the right side of his face, with his eyes and mouth wide open, and drawn strongly to the right, and his pupils dilated. There is slight general rigidity and opisthotonos for a few seconds, then the left arm and leg are jerked convulsively, the right arm and leg remaining rigid and outstretched. The eyelids are twitched rapidly; there is also some twitching of the right side of the face. There is no foaming at the mouth nor biting of the tongue. The fit lasts about a minute and a half, after which he usually passes into a quiet sleep for a short time, and wakens up as if nothing had happened; but sometimes he regains consciousness at once and is quite intelligent. During the fit there is usually involuntary micturition. The above description applies to all the fits in a remarkable manner, showing them produced by the same cause.

The following medicine was ordered:—

℞.—Hydrarg. bichlor., ...		2 gr.
Pot. iodid., ...		120 gr.
Infus. gent. co., ...	ad.	6 oz.

Sig.—1 dr. ter die. post cib.

He was thus to have $\frac{1}{24}$ grain hydrarg. bichlor. and 2½ grains potassium iodide, being a supersaturated solution of mercuric iodide, thrice daily. On 10th March the dose was doubled, *i.e.*, to $\frac{1}{12}$ grain hydrarg. bichlor. and 5 grains potassium iodide, thrice daily, which he took until dismissed.

The following table, copied from the ward journal, shows the number of fits taken and the progress of the case:—

NUMBER OF FITS IN TWENTY-FOUR HOURS.

March 1, .	24	March 11, .	19	March 21, .	8
,, 2, .	22	,, 12, .	24	,, 22, .	8
,, 3, .	24	,, 13, .	17	,, 23, .	4
,, 4, .	18	,, 14, .	15	,, 24, .	6
,, 5, .	20	,, 15, .	17	,, 25, .	2
,, 6, .	23	,, 16, .	15	,, 26, .	0
,, 7, .	23	,, 17, .	15	,, 27, .	2
,, 8, .	20	,, 18, .	13	April 11, .	1
,, 9, .	18	,, 19, .	8	,, 12, .	1
,, 10, .	18	,, 20, .	10		
Carry forward,	210	*Carry forward,*	363	*Total fits,* .	395

The above table shows that from 1st until 27th March patient had 393 fits, and that from the latter date until 11th

April, an interval of fifteen days, he had no fits, but had a fit on 11th and one on 12th April, making total fits 395. From 12th April until 31st May, an interval of forty-nine days, he had only one fit, which was apparently brought on by his extremely active habits, my staff nurse characterising him as "a very wild boy." He was dismissed on 31st May without a trace of paralysis, and not having had a fit for about a month.

As regards treatment, putting aside attention to the digestive organs, it consisted solely of giving the medicine named, of which I find he got altogether 21¾ grs. of bichloride of mercury and 2½ oz. 30 grs. of iodide of potassium. Considering patient's age, 11 years, it may seem that the dose of biniodide of mercury was large, the maximum dose in the *British Pharmacopœia* being one-eighth of a grain. It is well known, however, that young persons stand more mercury in relation to their ages than adults, which this case confirms. I did not anticipate any untoward symptoms from the first doses of the medicine, but when these were doubled I was on the outlook for gastralgia, diarrhœa, vomiting, and possibly salivation, but none of these occurred.

My reason for giving the biniodide of mercury was, that I thought probably some morbid matter from the contused part was causing irritation of the motor centres, under either mental or physical conditions of the body which raised the blood pressure, this medicine being well known to increase the absorption of morbid fluids and deposits by stimulating the absorbent system.

A surgical colleague was consulted as to whether a portion of bone might be pressing on the brain, and trephining over the cicatrix suggested. This, however, he declined to do, thinking it a case that operative procedure would not benefit.

III.—Case of Poisoning with Bromide of Potassium.

E. C., commercial traveller, æt. 42, was placed under my care in the Royal Infirmary on 24th February, 1892. When admitted he was semicomatose, but with considerable shaking could be slightly roused, when he would answer a few questions intelligibly, then gradually lapse into a maudlin condition. The boots of the hotel where he had been staying, stated that in order to waken him that morning he had to break open his bedroom door. Pulse, 60, weak; respiration easy, slow, and deep—no stertor; heart and lungs normal; temperature, 96·8; extremities blue and cold; face livid;

pupils equal and normal in size and reaction; almost total abolition of reflex action; great muscular relaxation; general cutaneous anæsthesia; bowels constipated; urine normal. It was clear from the first, especially from the absence of stertor, that this was not a case of apoplexy; and from the pupils being normal, that it was not a case of opium poisoning; and from there being no odour of alcohol or acetone from the breath, that it was not one of alcoholic poisoning. In the course of several rousings and questionings about the cause of his condition, it was latterly elicited that he had been in the habit of taking bromide of potassium, as business worries kept him from sleeping, and that the previous night he had taken half an ounce, and the night before that an ounce. Satisfied with this explanation, he was ordered $\frac{1}{100}$ gr. of digitalin hypodermically night and morning, with half an ounce of brandy every four hours. Meantime a brother in England, whose address he gave, was communicated with, and who wrote in reply that patient had a serious illness of the nature of influenza about a year ago, and since then he had had strange hallucinations. One of these was that he was being mesmerised; another, that detectives were after him, although he did not know why; and another, that he had a large fortune. His brother also stated that three of his previous landladies had put him out for barricading the doors and disturbing their houses; and further, that patient had always been temperate in his habits.

He remained without much improvement for a fortnight—sometimes drowsy and almost comatose, at other times garrulous, slightly aphasic, and chattering nonsense, and at intervals quite sensible. Meantime the stimulant and digitalin had been gradually withdrawn and Easton's syrup substituted. Latterly the hebetude caused by the bromide slowly cleared off, and he was dismissed on 18th March, so far well, but still having some strange fancies.

A special point in this case is the lengthed period—three weeks—during which the bromide exerted its physiological action. The presence of bromides, however, have frequently been found in the urine two weeks after the last dose had been taken, and Rabuteau, under similar circumstances, has seen its presence (bromine) persist for a month, thus showing that the bromides are slowly excreted.

The symptoms in this case held as due to bromism are the general cutaneous anæsthesia; muscular relaxation; total abolition of the reflexes; lowered temperature, respiration, and pulse; the great somnolence.

It has been said that in some cases of bromism the pupils are dilated and uncontractile, and that the colour of the skin and face is unchanged. As already stated, however, in this patient the pupils were normal, while the face was livid. This latter condition was no doubt caused by the reduced cardiac action, and respiration preventing due aëration of the blood; hence also the subnormal temperature. The digitalin, a famed cardiac tonic, and the alcohol, a recognised cardiac stimulant, were indicated by the lowered pulse, respiration, and temperature, while the Easton's syrup was given, of course, as a general tonic.

A NOTE ON STATISTICS OF ENTERIC FEVER.

By DONALD MACPHAIL, M.D., Whifflet.

That it is very rash to draw conclusions as to the results of different methods of treatment in enteric fever from brief series of cases is pretty well known to all who have looked into the literature of the subject. The following extracts from reports published in America, Australia, and Scotland, bearing on this point, explain themselves:—

A. L. Mason, M.D., publishes statistics of 676 consecutive cases treated in the City Hospital, Boston, Mass., U.S.A.* The death-rate over all was 10·4 per cent. In the course of his paper he says, "So many accidental circumstances affect the result that it seems almost impossible to determine numerically the proportion of recoveries which may be due to therapeutic measures. . . . The virulence of the disease may vary at different times and in different countries, so that no practical conclusions can be drawn from a small number of cases. How large that number should be in order to eliminate chance is also uncertain.

"Thus if we divide our 676 cases into 13 series of 50 cases each, it is found that the mortality in the different series varied from 6 per cent to 20 per cent.

"Between 6 series of 100 consecutive admissions each the death-rate ranged from 6 per cent to 14 per cent; whereas 3 series of 200 cases each differed only by 1 per cent—viz., 10 per cent, 10·5 per cent, and 11 per cent respectively. But in 2 series of 300 cases each there was a difference of more than 2 per cent—viz., 9⅓ per cent, and 11⅔ per cent respectively.

* *Boston Medical and Surgical Journal*, 7th April, 1892.

"In the hospital there are three medical services to which the cases, as admitted, are allotted in turn. To show still further the fallacy which may arise from the attempt to draw conclusions from small numbers of cases, I may state that one of the services received 54 consecutive cases without a death. Again, there were:—

31	cases	without a death.					
42	,,	with	1	death	=	2·4	per cent.
30	,,	,,	1	,,	=	3·3	,,
46	,,	,,	2	,,	=	4·3	,,
39	,,	,,	1	,,	=	2·5	,,
242	,,	,,	5	,,	=	2	,,

For purposes of comparison, I have selected the very interesting statistics of Dr. F. E. Hare, of the Brisbane Hospital, Queensland,* as being impartial, logically drawn up, and relating to a sufficient number of cases to admit of practical conclusions. In that institution, before 1887, under the expectant plan, it was found that in 3 series of 600 cases each the death-rate varied between 14·3 per cent and 15·3 per cent, or only 1 per cent. So the conclusion was that groups of 600 cases were large enough to allow an estimate of the comparative effects of treatment, since the probable error from accidental causes would be small.

"Therefore one series of 676 cases may be regarded as a suitable number for comparison in the future or with the records of the past, while the results in smaller groups of 100, 200, or 300 cases may so vary as to be of very little value."

In 1879 I published† statistics of all the cases of enteric fever (not including "febricula") admitted to Belvidere, Glasgow, during 8 years. The cases numbered 2,334, and the death-rate over all was 11·3 per cent. The admissions for each year and the death-rate among each year's cases were:—

1st	year,	83	cases.	Death-rate	per cent,	15·6
2nd	,,	181	,,	,,	,,	11·0
3rd	,,	275	,,	,,	,,	9·4
4th	,,	342	,,	,,	,,	7·01
5th	,,	499	,,	,,	,,	11·2
6th	,,	292	,,	,,	,,	12·7
7th	,,	283	,,	,,	,,	14·1
8th	,,	376	,,	,,	,,	13·5

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* *The Practitioner*, March, 1891.

† *Glasgow Medical Journal*, October, 1879.

From that article I reproduce the following paragraph:—

"The variation in the annual death-rate of enteric fever is worthy of note, for it has ranged from 7·01 per cent to 15·6 per cent. This has not been due to any difference in the mode of treatment in the different years, for the same principles have been adhered to throughout and carried out consistently.* Such variation surely betrays a source of serious fallacy in observations upon the results of different modes of treatment of enteric fever. If it had happened that a physician had taken charge of this hospital at the end of the first year, and had introduced new methods of treatment, and then compared *his* first year's results with those of his predecessor, the lowering of the death-rate by 3·6 per cent would probably, and with apparent justice, have been attributed to the 'improved method.' Perseverance in the same course for two years more, with more rigorous attention to the details of his own method, would have apparently confirmed his results by bringing down the death-rate to less than half what it had been for the year previous to his entering upon office. Further observation during the next four years, however, would have disappointed him and staggered the faith of his disciples. It seems clear that observations on the results of treatment in enteric fever must extend over a very considerable period, and over a large number of cases, before very reliable general statements can be founded on them."

The only reliable general statement seems to be that "the natural variation in enteric is so great as to detract very much from the value of statistics as to the results of treatment."

ON A CASE OF MULTIPLE VASCULAR NÆVI, WITH SUBSEQUENT DISAPPEARANCE OF MANY OF THEM.

By ROBERT J. MARSHALL, M.B., C.M., IVER, BUCKS.

THE following history of a case I attended lately will, I hope, prove of sufficient interest to merit publication in your journal:—

On 13th October Mrs. B. was delivered, after a natural and easy labour, of a plump, well-formed female child, which had on the right side, behind the angle of the jaw, just over the sterno-mastoid muscle, an oval "mark." This was half again as large as a shilling, perfectly circumscribed, raised above the surface, of a deep purplish pink colour, and consisted of dilated vessels which were as thick as a stocking wire in the centre, and branched off into smaller vessels towards the periphery. The skin was very thin, so that this branching was very plainly seen. It enlarged when the child cried, and could be emptied by pressure, filling almost instantly when pressure was removed. It felt quite soft to the touch, and had no apparent pulsation. No other mark was observed on any other part of the body.

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* "General principles," namely, as in Mason's and Hare's cases.

About three days afterwards one or two small pink spots appeared on the scalp and forehead, and each day fresh ones appeared on other parts of the body, the earlier ones increasing in size, so that at the end of three weeks there were about one hundred, varying from the size of a pinshead to as large as a large split pea, of which latter size there were about thirty. The legs, arms, scalp, and back were most affected, the face and front of the chest and abdomen being comparatively free. There were one or two on the palms of the hands and soles of the feet, and on the inside of one ankle were numerous minute pink dots, which, however, disappeared in a day or so. The name "spot" I use for convenience, as in reality they were round elevations resembling nothing so much as vesicles containing blood, such as one sees when the skin is sharply pinched as by the hinge of a knife, causing the cuticle to be raised by effusion of blood underneath it. They were deep pink in colour, and quite circumscribed from the healthy skin. They felt soft under the finger, and were easily emptied by pressure, but filled instantly when it was removed, allowing one, however, a momentary glimpse as they filled of the vascular network of which they were composed.

I punctured, with a sharp needle, one of the size of a split pea, and it bled profusely in large drops, and was only arrested by continuous pressure with a pad of lint soaked in a weak solution of perchloride of iron, and next day it was as prominent as ever. About four weeks after birth there was a stoppage in the development of the "spots" which, after a week, began to decrease in number and size. One or two on the buttock ulcerated and disappeared, leaving minute pink scars. Others of the smaller ones vanished, leaving no trace, while the remainder became smaller in size, less prominent, firmer to the feel, and less easily emptied. Round a few of the large ones was a thin white ring, as if gradual obliteration were commencing at the edges. At present, that is eight weeks after birth, there are only about twenty, and they have changed greatly. The mother says "they die off white," and this process can be seen in various stages. They first become flatter and flaccid with a more sluggish circulation, as shown by the comparatively slow filling up after pressure of the finger is removed, then they become paler and streaky, and contract till nothing is left but a white, flat, firm elevation, which gradually disappears entirely. In some of the paler ones, especially with the aid of a lens, one can see an irregular network of dilated vessels, this network being denser in the centre. The "mark" on the neck remained stationary for almost three weeks, when it became more prominent in the centre, and on two occasions, with an interval of two days between them, bleeding occurred. The mother said a small pimple rose up in the centre which, after a few hours, burst, the blood spouting, but stopping quickly. For some days after this there was considerable oozing of blood, so that the child became fretful and slightly anæmic, and yawned frequently, and the navel, which had previously healed, began to ulcerate, but quickly healed again on an astringent being applied. At the suggestion of Dr. Anderson, my principal, compresses of lint soaked in half and half solution of perchloride of iron *(B.P.)* and water were kept continually applied, with the result that, after a day or so, a large black scab covered the entire "mark." Ulceration started underneath, and when the scab was removed about a fortnight ago, nothing remained of the mark but a healthy granulating surface. From this time the child began to improve rapidly, and is now very plump, the ulcer in the neck having almost cicatrised. All throughout the child took the breast milk well, and all its functions were performed naturally. Mrs. B. has five other children who are very healthy, and without any blemish of any sort.

Though capillary nævi of the skin are by no means uncommon, still it is unusual for them to appear in this spontaneous manner, and also to have them on such rare sites as the legs and palms of the hands. Their appearing in such numbers is very remarkable, and it is worthy of note that they ceased developing at a time when a state of comparative anæmia had been brought about by the hæmorrhage in the neck. The method by which the large nævous became obliterated is also, I think, interesting.

ON THE ANTIPYRETIC ACTION OF ANTIPYRIN AND ANTIFEBRIN.

By W. A. M'LACHLAN, M.D., DUMBARTON.

FREQUENTLY in medical, and occasionally in lay circles, one meets with individuals who evince an almost unrelenting scepticism regarding the actions of medicines, some indeed priding themselves in being agnostics. The capacity to intelligently meet such *outré* individuals forms, fortunately, nowadays part of general medical education. With modern methods of investigation, approaching in some measure to an exact science, this is not difficult, especially with those drugs, powerful though they be, that are calculated to make impressions on bodily temperature.

In the following case, which has been under my care for a period well-nigh approaching two years, careful thermometric observations were kept, from the month of April, 1891, to October of the same year, of the actions of antipyrin and antifebrin. In these tables are notes, and one can at a glance see where and under what conditions the antipyretic properties of these drugs manifest themselves.

Previous to making a few extracts from these, I may be permitted to say that during March, 1891, I was called to see Miss L., aged 16 years, whom I had known from babyhood, being present at her birth, and on whom I had on two former occasions attended for acute peritonitis. I found her exhibiting the symptoms of acute phthisis pulmonalis, the disease presenting the characteristic which Niemeyer has termed the pneumonic type.

She was for some time treated with, in the form of medicine, a powder composed of quinine, grey powder, digitalis, and opium, and I endeavoured to meet the more urgent symptoms with poultices, sponging the skin frequently with acetised water, and a number of external applications calculated to diminish temperature, while nursing, good easily-assimilated food, airy, well-kept, temperate bedrooms, and many of those things that a well-to-do middle class patient can command, were attended to. Despite these, however, there was persistent high temperature, cough, sweating, disturbed nutrition, and progressive emaciation, with lung destruction, more marked, however, in the right than in the left viscus, so that one began to see that unless the persistent febrile condition could be somewhat controlled, disease would soon and rapidly destroy the patient.

Accordingly, in the beginning of April, the Niemeyer powders were stopped, and medicines calculated to assuage the cough, assist digestion, promote renal elimination, and calm nervous symptoms were administered, while frequent sponging (it being grateful to the patient) was continued. A medicated pillow, consisting of tarry oakum, was prepared for the patient to rest on, the object being to allow her to respire antiseptic air without embarrassing, during the acts of respiration, in the least degree the muscles of respiration. Feeding hourly on nutritious easily-assimilated food was followed, and the nurse was instructed to take the temperature every hour, commencing daily at 4 P.M., and to administer 12 grains of antipyrin at once if the temperature was over 100° F., and to repeat the powder every two hours till the temperature came down, if possible, to normal. If, however, at the end of an hour the temperature had gone up instead of becoming lower, then the dose of antipyrin was to be repeated. This course was followed during the whole of the months of April and May. From the 59 observations made during these months, the following extracts, taken at random, may be useful:—

April 14, . . .		Patient feels cold and creepy.
	Temp.	
4 P.M., .	101·2° F.	12 grains of antipyrin.
5 P.M., .	100·7°	
6 P.M., .	101·6°	12 grains of antipyrin.
7 P.M., .	101·2°	
8 P.M., .	99·8°	
9·30 P.M.,	98·1°	Feels well and comfortable.

May 1, ...		Skin hot, dry, and patient feels creepy.
	Temp.	
4 P.M., .	102·4° F.	12 grains of antipyrin.
5 P.M., .	101·2°	
6 P.M., .	100·6°	12 grains of antipyrin.
7 P.M., .	100·4°	
8 P.M., .	101·2°	12 grains of antipyrin.
9·30 P.M.,	99·4°	Feels well, with skin gently perspiring.

May 12, . . .		Patient feels cold and creepy; skin dry.
4 P.M., .	102·4° F.	12 grains of antipyrin.
5 P.M., .	99°	
6 P.M., .	98·8°	
7 P.M., .	99°	
8 P.M., .	101·8°	12 grains of antipyrin.
9·30 P.M.,	102·2°	Gastric disturbance and feels uncomfortable.

May 31.		
4 P.M., .	98·2° F.	
5 P.M., .	98·5°	
6 P.M., .	100·2°	12 grains of antipyrin.

May 31.		
7 P.M.,	100·2°	
8 P.M.,	98·3°	
9·30 P.M.,	97·2°	Which low temperature was maintained, and fell to 96·5° F. at 4 P.M. on 1st June, and only rose to normal (98·4° F.) at 9·30 the same evening.

During this period of fighting, and that somewhat successfully, in keeping down the temperature, patient was evidently gaining ground, putting on flesh, and the cough and lung symptoms were evidently less troublesome. It was deemed prudent to extend the range, as regards time, of the thermometric observations. Accordingly, from the 1st June to the beginning of October, the temperature was taken hourly during the daytime, commencing at 9 A.M. and continuing till 9·30 P.M. It was also thought that, perhaps for economic as well as therapeutic purposes, antifebrin might replace the antipyrin. During this period the antifebrin was to be administered in two-grain doses every two hours whenever the temperature was over 99° F. till it came down to normal. Thus watching the temperature carefully, one was able, so to speak, to meet any indications of its rise at once.

Of the 124 records, a few may be of interest:—

June 10,		Patient feels cold and creepy.
9 A.M.,	101·4° F.	2 grains of antifebrin.
10 A.M.,	100°	
11 A.M.,	98·6°	
12 A.M.,	100·2°	2 grains of antifebrin
1 P.M.,	100·2°	
2 P.M.,	100°	
3 P.M.,	101·7°	2 grains of antifebrin.
4 P.M.,	98·8°	
5 P.M.,	98·4°	
6 P.M.,	99·8°	2 grains of antifebrin.
7 P.M.,	100·4°	
8 P.M.,	99°	
9·30 P.M.,	101·1°	2 grains of antifebrin; gastric disturbance.

July 10—		
9 A.M.,	97·6° F.	
10 A.M.,	97°	
11 A.M.,	98·8°	
12 A.M.,	99·2°	2 grains of antifebrin.
1 P.M.,	98°	
2 P.M.,	98·6°	
3 P.M.,	98·8°	
4 P.M.,	98·4°	
5 P.M.,	98·8°	
6 P.M.,	98·8°	
7 P.M.,	100·6°	2 grains of antifebrin.
8 P.M.,	100°	
9·30 P.M.,	98·8°	Feels well.

August 21—

9 A.M., .	99·8°	2 grains of antifebrin.
10 A.M., .	99·4°	
11 A.M., .	98·4°	
12 A.M., .	98·7°	
1 P.M., .	100·7°	2 grains of antifebrin.
2 P.M., .	100·3°	
3 P.M., .	100·2°	
4 P.M., .	98·2°	
5 P.M., .	99·9°	2 grains of antifebrin.
6 P.M., .	99·6°	
7 P.M., .	99·7°	2 grains of antifebrin.
8 P.M., .	99·1°	
9·30 P.M.,	98·2°	Feels well, digestion being fairly well performed.

This method was followed strictly on till the beginning of October, when it was found that the sum total of the temperatures extended over a long period, though there were oscillations above and subnormal depressions, amounted to about normal; and, moreover, the patient distinctly improved, so much so, that she went to Bute for a short residence. Moreover, the lung condition seemed to be becoming quiescent; cough and sweatings had been quieted; digestion improved; weight gained; and the general aspect of the patient giving altogether evidence of promise. It was thus considered unnecessary to watch the febrile symptoms so closely, but the use of the thermometer was by no means forgotten, the patient herself having been taught to use it intelligently, which she still does two or three times a day.

On looking over these tables carefully, and also over these random extracts accompanying this paper, it will be seen that there are periods when the temperature did not immediately fall after the use of these drugs, but in some instances rather rose. In other instances the fall was after a time considerable, amounting to a condition quite approaching collapse. This I found not to be due to any inherent qualities of the drug itself, but rather to a faulty and, perhaps, temporary condition of the digestive organs, preventing, for the time being, the drug from passing into the general circulation; and hence, when a second or even a third dose had been administered, and a rally, so to speak, of the temporarily deranged functions had followed, the overdose was too quickly absorbed into the general system, and symptoms of a poisonous nature, one of which was collapse, exhibited themselves. The influence of these drugs on the sanguineous, cutaneous, and neural systems was not watched too carefully by me. My impression is that they produce gently diaphoresis, relax capillary spasm, thus slowing the pulse, and inducing diuresis;

lowering the temperature, they calm nervous symptoms; rendering the patient comfortable, they promote sleep. Of these two drugs, the impression formed by me was, that for controlling temperature, antifebrin was, at least in this case, the more reliable drug.

The present condition (January, 1893) of this patient is certainly not satisfactory, the upper anterior aspect of the right lung being much diseased, while its fellow at the opposite side has frequently exhibited suspicious symptoms. Yet, whenever the temperature gives indication of slipping up, 2 or 3 grains of antifebrin acts as a controller, and restores it to 98·4° F.

ON A CASE OF DIFFUSE GANGRENE OF THE LEFT LUNG, DUE TO THE UNSUSPECTED PRESENCE IN THE BRONCHUS OF A TEMPORARY MOLAR TOOTH, WHICH HAD ACCIDENTALLY BECOME DISLODGED WHILE PATIENT WAS UNDER AN ANÆSTHETIC.*

By THOMAS KIRKPATRICK MONRO, M.A., M.B.,
Pathologist, Victoria Infirmary; Assistant Physician, Royal Infirmary, Glasgow.

As much of the interest of this case is derived from the results of the *post-mortem*, Mr. Maylard, in whose ward the patient was, has kindly invited me to give an account of it to this Society.

W. B., æt. 10, schoolboy, was admitted to the Victoria Infirmary, under Mr. Maylard, on account of swelling and pain in the left knee-joint, dating apparently from a fall in January a year ago. His previous health had been good, and there was nothing worthy of special note in the family history.

By the courtesy of Mr. Maylard and his assistant, Dr. Lochhead, I have been permitted to examine the clinical records of the case, and on these I have based the following summary:—

The left knee-joint was excised, and a sequestrum connected with the femur removed, on the 30th November, 1892. On the evening of the second day afterwards (2nd December) the temperature was febrile, and it continued from then till the end of the case, of a characteristically septic type. On the 3rd December, a slight cough and a rising temperature were recorded, without, however, any sickness or headache. The knee was tender, but looked well.

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* Read at a meeting of the Glasgow Pathological and Clinical Society, 9th January, 1893.

On the 4th, there was slight dry cough, with dry râles at the back.

On the 7th, breathing was rapid and shallow, 38 per minute; pulse, 120; face flushed; cough, but no expectoration. There was dulness on percussion over almost the whole of the left lung posteriorly, with greatly diminished R.M., V.R., and V.F. The leg looked well.

On the 11th, an increasing rapidity of pulse and respiration were recorded, while patient was becoming strikingly emaciated.

On the 12th, percussion-dulness was noted on the left front. Crepitant râles were heard at the base posteriorly. There was no pain in the chest.

On the 14th, patient suffered from diarrhœa. The breathing and pulse were still becoming accelerated, and it was observed that the breath had a very offensive odour. A typhoid condition was setting in.

On the 15th, the odour of the breath was still worse, and patient was now insensible. He died early in the morning of the 16th, or about sixteen days after the operation.

The *post-mortem* was made on the 16th December.

The body was greatly emaciated. There were no signs of union having commenced between the divided ends of bone at the left knee.

The heart was healthy-looking.

The left lung was firmly adherent to the chest wall, and when an attempt was made to draw it forward, its tissue at once gave way, and allowed a horribly fœtid odour to escape. When the organ was cut up, its whole substance was found to be riddled with small gangrenous cavities which contained a foul-smelling fluid of a brownish-green colour. These changes were perhaps most advanced at the lower part of the lung. The right lung was normal. Such diffuse gangrene, limited to one lung, was, of course, highly suggestive of a foreign body, and this was readily found. When a blade of the scissors was introduced into the left bronchus, to open it up, it at once came in contact with a hard body which was lying quite loose in the bronchus, just where that structure enters the lung substance. This foreign body proved to be a temporary molar tooth of the upper jaw. It contained a carious cavity. The mucous membrane of the left bronchus was much congested from a little distance below the bifurcation of the trachea downwards.

Microscopic examination of a piece of the left lung shows an abundant infiltration of its substance with leucocytes and epithelial-like cells. Cavities are present, which are enclosed by a thick wall of necrosed tissue, and owe their origin, no doubt, to necrosis and subsequent removal of lung tissue. Such cavities have, of course, no epithelial lining. Bronchial tubes are also observed with their walls preserved, though the epithelium shows signs of proliferation; the lumen of such tubes contains secretion, and the wall is pressed upon by the cellular infiltration in the surrounding tissues. The alveoli are filled with cells. The tendency to necrosis of tissue is a striking feature in the morbid process.

The spleen contained several caseous-looking masses, small portions of which were calcified. These masses could be felt on the surface of the organ as hard, slightly elevated prominences, but did not show otherwise before the organ was cut into. On section it was seen that they were situated at a little distance under the surface. Though no unequivocal giant-cells have yet been found by the aid of the microscope, it is very probable that these caseous masses are of tubercular origin.

The liver and kidneys appeared to be healthy.

I submitted the tooth removed from the bronchus to the inspection of my friend Dr. William Wallace, who found that it belonged to the right side of the upper jaw, but whether it was the first or the second molar, he said, could not be determined.

At the autopsy, the boy's upper jaw contained a complete set of teeth for his age—viz., on each side, two incisors, one canine, two biscupids, and one molar. But, as Dr. Wallace remarked, this gives us no information as to how long the tooth might have been in the air-passages, inasmuch as the temporary teeth may remain in the gums for many years after the appearance and full development of the permanent teeth which ought to replace them. In the lower jaw there were, on each side, two incisors and one permanent molar. There was, in addition, on one side, a loose temporary molar.

It is not surprising that the real nature of this case remained obscure until light was thrown upon it by the *post-mortem*. The symptoms that might have been expected to show themselves soon after the inhalation of such a body as a tooth—suffocative attacks, cough, pain—as well as the personal testimony of the patient, were absent; and when the cough did come, it seems to have been a symptom of the bronchitis which had already set in.

A probable theory has been formed as to the manner in which the tooth got into the bronchus. At the time of the operation, the patient suffered a good deal from chloroform sickness, and the mouth was swabbed out to free it from secretions, vomited matter, &c. In this way, two loose teeth were detached from the gums. These were noticed and removed at the time, but it is supposed that a third (the offending one) was also knocked out, and that it was drawn into the chest through the violent movements connected with retching. This theory would explain the facts of the case, including the time of onset of the bronchial and pulmonary disease.

CURRENT TOPICS.

Presentation of Professor Gairdner's Portrait to the University of Glasgow.—On Saturday, the 28th January, 1893, at noon, a portrait of Professor W. T. Gairdner, painted by Sir George Reid, President of the Royal Scottish Academy, and subscribed for by between five and six hundred of his old pupils, was presented to the University. The ceremony took place in the Bute Hall, Principal Caird presiding, and the presentation was made by Dr. Joseph Coats. It had been originally intended that the ceremony should be performed in the Randolph Hall, but so great was the number of ladies and gentlemen desirous of being present that it was found necessary to make use of the Bute Hall, the area of which was about three-fourths full. The Principal and Professor Gairdner occupied the elevated railed platform in front of the pulpit, and on each side of this stood the portrait and the replica, covered with green silken curtains. On the raised portion of the floor which accommodated the portraits, and immediately beneath the platform, were seated the gentlemen taking active part in the presentation ceremony—viz., Dr. Joseph Coats and Dr. G. S. Middleton in the middle, and Dr. Yellowlees and Dr. Quintin M'Lennan, who had places beside the replica and the portrait respectively on either side. The day was stormy and dull, and the dim light which came through the stained windows of the hall was quite insufficient to allow of the pictures being seen to advantage when they were unveiled. Dr. Middleton intimated letters of apology, and Dr. Joseph Coats, after referring in a vigorous speech to the history of the movement for presenting the portrait, and to the high personal and professional qualities of Professor Gairdner, formally presented the portrait to the Principal, who received it on behalf of the University. In receiving the gift, the Principal, in a short speech characterised by his usual eloquence and power, also bore testimony to the high esteem in which Professor Gairdner was held, not only as a professional man whose reputation was based on the opinion of experts, but as a man of the widest culture and of profound learning.

At the end of Dr. Coats' speech the portrait was unveiled, and at once became the centre of the fixed gaze of the large assemblage. The dim light prevented details being seen, but was quite sufficient to show that a work of art of no mean merit stood revealed The graceful pose of the sitting figure, the placid philosophic face, the subdued tones, and the absence of the usual commonplaces of ordinary portraiture, attested at once the high merit of the picture, and justified the statement of Dr. Coats that the portrait was probably one of the best that had come from the brush of its distinguished painter. A more minute and nearer inspection of the canvas at the end of the ceremony confirmed these impressions, and the work will form an important addition to the art treasures of the University.

Dr. Yellowlees, as one of the oldest pupils and house-surgeons, presented the replica to Professor Gairdner, who then cordially thanked the donors for their generous gift, and, in the course of an autobiographical sketch of his career, made fitting reference to many departed friends, both colleagues and students, whose names were of world-wide reputation in the science and art of medicine.

An early proof of the mezzotint engraving of the portrait by Mr. James Faed was also exhibited, and gave much satisfaction.

The proceedings were brought to a close by Dr. Quintin M'Lennan proposing a vote of thanks to the Principal.

THE GLASGOW SOUTHERN MEDICAL SOCIETY—COMPLIMENTARY DINNER TO DR. J. W. ALLAN.—On the evening of the 12th January, 1893, in the North British Station Hotel, the members of this Society entertained Dr. J. W. Allan at dinner on the occasion of his resignation of the office of Physician-Superintendent of Belvidere Fever Hospital, an office which he had held with great acceptance to the medical profession and to the general public for the long period of eighteen years. Dr. David Couper, President of the Society, occupied the chair, and Dr. James K. Kelly officiated as croupier. A very large number of members of the Society and other medical gentlemen were present. The chairman, after proposing the health of Dr. Allan, presented him with an address from the Society, in which the regret of the members at his resignation, and their grateful recognition of his long and valuable public and professional services, were fittingly expressed. Dr. Allan cordially thanked the Society for the address. A very enjoyable evening was spent, the gentlemen present vieing with each other in cordially wishing Dr. Allan long life, health, and prosperity.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—The fifth ordinary meeting of the Society will be held in the Faculty Hall, 242 St. Vincent Street, on Monday, the 13th inst., at 8 o'clock. The following cases and specimens will be shown:—By Dr. Finlayson—specimens from a case of aneurysm of the thoracic aorta, with cancer of the pancreas; by Dr. Coats and Dr. John Adams—a specimen of the so-called siren malformation of the lower limb (sympus dipus); by Professor Gairdner—a specimen of gangrenous ulceration of the bowel (? syphilitic), &c.

GLASGOW ROYAL INFIRMARY.—Dr. A. N. M'Gregor has been appointed Assistant Surgeon to the Infirmary in room of Dr. John Macintyre, resigned.

BY the wreck of the Anchor Line s.s. *Roumania* off the coast of Portugal, on 28th October, 1892, Alfred Gerard Ginders, L.R.C.P. and S. Ed., the Surgeon to the ship, lost his life. He left a widow totally unprovided for, who, although willing to work for her living, is rendered unfit for any active employment by tibial ostitis, from which she has suffered at intervals since childhood. Mr. Ginders had only obtained his diplomas in July last, and had, consequently, no opportunity of making any provision whatsoever for his wife. A small Committee has been formed for the purpose of raising such a sum of money as may enable Mrs. Ginders to earn a living in some light employment suitable to her condition of health. The Committee consists of—Henry E. Clark, Professor of Surgery, St. Mungo's College, Glasgow; John M'Intyre, M.D., Lecturer on Diseases of the Throat and Nose, Glasgow; Quintin M'Lennan, M.D., Assistant Surgeon, Glasgow Royal Infirmary (Treasurer). Subscriptions will be received by Dr. M'Lennan, 191 Pitt Street, Glasgow, and a direct acknowledgment sent.

REVIEWS.

Vaccination Eruptions. By THOMAS DOBSON POOLE, M.D. Edinburgh: E. & S. Livingstone.

THE author of this little work has had his attention called to the subject with which he deals by the occurrence of some anomalous eruptions following on vaccinations performed or observed by himself. He has made himself well acquainted with most of the reliable literature of recent date bearing on his theme, and has put into a convenient and useful form a great deal of information that could otherwise be obtained only by hunting through a variety of medical periodicals and other publications. The work ought therefore to be welcomed by all who have much to do with vaccination, and especially by public vaccinators, who are the only persons likely to have the opportunity of meeting with some of the very rare vaccinal sequelæ of which he principally treats. Indeed, the ordinary medical practitioner who picks up the book after many years' vaccination among his own private patients, may well peruse it from beginning to end without recognising almost any of the eruptions as ever having occurred in his own experience. Nevertheless, it is well that they should be collected and recorded in some such fashion as Dr. Poole has followed.

Beginning with some notes on lymph, he proceeds to describe such irregularities as supernumerary vesicles, tardy vesicles, running vesicles, and vaccination ulcers. In the paragraph on "tardy vesicles," he relates that from a typical vesicle on the arm of an adult (calf lymph having been used) he revaccinated another adult, and got a less perfect vesicle. From this he revaccinated another adult, and got only a small "mark," the pock having run a rapid course. This he accepts as attenuation of the lymph. The acceptance is surely too hasty, and the conclusion rather out of proportion to the trifling amount of experiment (especially in the absence of control experiment) on which it is based. It has been found in the army that about 30 per cent of recruits do not react at all to the first attempt at revaccination, and that about 30 per cent more have only a modified vesicle. These results, however, are due, not to any attenuation of lymph, but to comparative insusceptibility to the vaccine virus. Dealing next with "eruptions due to pure vaccine inoculation," he truly remarks that their main factor is constitutional predisposition, and he adds that the type of eruption may sometimes give a hint as to the constitution of the patient. Roseola, erythema, urticaria, miliaria, pemphigus, purpura, and eczema are treated of in succession (as we have said, a man may vaccinate for a lifetime and never see some of these), and then a chapter is devoted to "Vaccine Généralisée," which may be due, it is said, to blood infection, or to auto-inoculation, or both. He quotes a curious record of general eruption following the administration, in the form of medicine, of powdered vaccine crust to a child that had proved refractory to repeated inoculations of vaccine lymph. This reminds one of Ceely's account of an outbreak of vaccinia among the cows in a dairy, following on their having licked up the chaff of a bed on which small-pox patients had lain. Dr. Poole devotes a dozen pages to the discussion of a fatal case of post vaccinal eruption, which occurred in his own practice. We are not by any means sure, however, that the evidence he adduces is sufficient to establish the diagnosis of generalised vaccine. In particular, the first two guinea-pig experiments seem quite inconclusive, notwithstanding the author's statement that "it may be concluded that the scabs in guinea-pig A were due to vaccine." No micrococci yet found in vaccine lymph have been shown to be pathognomonic of vaccinia, and no opinion can safely be based on the presence or absence of particular organisms in any one sample. With Dr. Poole's general view of the case there is, however, no reason to quarrel—his opinion, namely, that "the disease was due to some constitutional peculiarity of the patient."

A chapter is very profitably devoted to vaccine syphilis. Mr. Hutchinson's statement is quoted that "a certain number of syphilitic infants look perfectly healthy whilst very efficiently contagious." We do not think, however, that Mr. Hutchinson himself would accept Dr. Poole's subsequent version (p. 91) of this opinion, where "a certain number" becomes altered into "many." Comparatively, such cases must be exceedingly rare, and Dr. Poole himself concludes his chapter by saying "that by a careful selection of the vaccinifer, avoiding in some instances first-born children, by taking lymph, and the first few drops of clear lymph only from vesicles not later than the seventh or eighth days, by rejecting all sanguineous or otherwise coloured lymph, the chances of transmitting syphilis by humanised lymph are thus practically reduced to *nil*, as time and experience have shown."

The chapter on tuberculosis is one of the best in the book. Beginning with the axiom that the tubercle bacillus is a *sine qua non* in the production of the disease, the writer points out, that excepting in the case of some animals suffering from acute miliary tuberculosis, the bacillus is never found even in the blood of tubercular animals, much less in vaccine lymph; that the bacilli could not be found in the lymph of any one of eighteen revaccinated phthisical patients; that in forty-eight preparations made from the vaccine lymph of five patients advanced in tubercular phthisis, no bacillus could be found; that in order to inoculate an animal with tubercle, the bacillus has to be carried deep into the tissues; that on this account, infection is never produced at autopsies of tubercular subjects; that similarly, a superficial operation like that of vaccination could not be expected to convey tubercle, even if vaccine lymph ever did contain the bacillus; that the temperature of the epidermis is too low for the growth of the bacillus; that tubercle, when experimentally inoculated, spreads slowly and gradually from the point of inoculation; and that among all the millions who have been vaccinated since the days of Jenner, there is no record of any single one having ever presented at the point of vaccination any resemblance of tubercle. After recounting a number of inoculatory experiments of his own, performed on guinea pigs, and discussing the evidence in general, Dr. Poole says, "we may justly conclude that the transmissibility of tubercle by means of official vaccination is beyond the limits of possibility."

Other subjects shortly discussed are leprosy, erysipelas, vaccinia gangrenosa, &c.

The book is well got up, though not quite wanting in typographical errors (as "hundreth" for "hundredth" at p. 93, and "geenral" for "general" at p. 119). The author's style is sometimes a little peculiar, and his meaning is not always quite clear, as in the first sentence of p. 17. But the work forms a really useful addition to the literature of vaccination, and ought especially to be read by every public vaccinator in the kingdom.

Dictionary of Psychological Medicine. Edited by D. HACK TUKE, M.D., LL.D. London: J. & A. Churchill. 1892.

COMING as it does exactly one hundred years after the inauguration of The Retreat at York, and bearing on its title page the name of Tuke, the appearance of this work is completely in accordance with the fitness of things, and a worthier memorial of an event, so far reaching and so beneficial in its results as regards the insane, it would be hard to conceive. Dictionaries referring to medicine in general have already been published, but this is the first attempt so far as psychological medicine is concerned. It is a large work of nearly 1,500 pages, in two volumes, and in its preparation the editor has called into requisition the assistance of no fewer than 128 collaborators, nearly all of whom are well known and recognised authorities on the subjects treated by them. What lends an additional value to the book is the fact that, though most of the writers, as one would naturally expect, belong to the special department of psychological medicine, there are not a few who, while not directly connected with the specialty, have contributed articles on subjects which are associated more or less intimately with mental disorders. The aim which the editor has in view is to provide information in an easily referable form in regard to mental disease, in its legal as well as its medical aspect. The opening article is an ably written and interesting historical sketch of the insane by the editor, and this is followed by a clearly expressed, though necessarily, in a work which purposely is primarily devoted to *morbid* psychology, somewhat brief paper on the philosophy of mind by W. C. Coupland, after which comes the dictionary proper. This, besides dealing with the terms used in medical psychology, also provides information regarding the symptomatology, treatment, and pathology of insanity. An abstract of the Lunacy Laws as at present existing in Great Britain and Ireland is also included, as well as many valuable contributions bearing on the various legal aspects of insanity, while the different forms of mental disorder are described in articles of some length. Numerous references are appended to the more important articles, and this, with a copious bibliography of English psychological medicine given at the end, constitutes one of the most important features of the work.

We have nothing but praise to bestow on Dr. Tuke's dictionary. If anything he is too modest in his prefatory remarks. Bringing together as it does in handy form all that is of real importance in connection with the subject of mental disorders, it will undoubtedly meet a want that is felt, and be of the greatest service to those who devote themselves to the subject. In this we are at one with the editor, but we would go further, and venture to say that it will be found a most useful work of reference for the physician engaged in ordinary routine practice, whose responsibilities in cases of this kind are so great, but too frequently, it cannot be gainsaid, insufficiently regarded. Such a work as this labours under one disadvantage, and it is one for which the legal, and not the medical, profession is responsible. The new Lunacy Act of 1890 had not been in existence for a twelvemonth before it was found necessary to amend some of its provisions, and it is not at all improbable that it will in the near future undergo further alteration. Any change in the legal enactments regarding insanity would, to some extent, detract from the value of the book, but for this there is no apparent remedy.

Eyestrain (Commonly called Asthenopia). By ERNEST CLARKE, M.B., B.S. London: J. & A. Churchill. 1892.

THIS book shows its author to be a man of most persevering research, and may be said to contain an exceedingly good summation of our present state of knowledge on this important condition. The subject is dealt with under the headings of ciliary strain, muscular strain, and retinal strain. To a large extent the text of the book consists of quotations from, or citations of, the opinions of authors of more or less repute in this and other countries. We cannot help thinking that the author would have done better, and written a more useful work, had he contented himself by giving a clear, explicit statement of his own knowledge, with, of course, suitable references to the authors from whom he had obtained this knowledge. As a sample of the absurd length to which acknowledgments are carried, we may instance the following: " When rays coming from a point are refracted at an astigmatic surface, a linear image of the point is found at the focus of each principal meridian; and the direction of the linear image is *at right angles* to the meridian at whose focus it is formed (Frost)." Now, surely this property of cylindrical lenses was known long before Mr. Frost was ever heard of, or, for that matter, before he was living. We all know that Mr. Frost is a most painstaking and reliable man, but he would be the very last to claim the fatherhood of that discovery. The chief objection we have to this book is, that in the multiplicity of authors quoted, there is far too little winnowing of the chaff from the wheat. We could wish that a book dealing with eyestrain contained more explicit details as to the testing of refraction and its correction. From the descriptions given, we do not think it possible that anyone could thoroughly carry out these processes, which are, after all, the essentials of the rational treatment of ciliary strain.

Judging from Mr. Clarke's statements, we would believe that he is of opinion that the meridians of maximum and minimum refraction are always at right angles to each other, and that astigmatism is always accompanied with a diminution of the visual acuteness. Now, Mr. Clarke has far too good a knowledge of his subject to believe either the one or the other, but still that is how the matter stands in the book.

We congratulate the author on the portion of his book which deals with muscular asthenopia. In our opinion, though we notice what we think are one or two serious omissions, it is excellent. Here we find details of all the more recent views on this part of the subject, including Berry's important observations on the gradual lagging behind of convergence in vision for short distances. Cases of neurasthenic asthenopia are often the most trying to the ophthalmic surgeon. Correct as we please errors of convergence and of refraction, sometimes relief is only very partial.

We think that in addition to Holden's well known formula, it would have been advantageous had the author referred the reader to Mr. Percival's elaborate researches. They are, so far as we know, the best on the decentering of lenses.

We doubt the validity of Snellen's two-colour test for binocular fixation. It is quite possible that in an instant of time the respective green and red letters may be focussed first by one eye and then the other, and give the required mental picture. The test was originally intended as one for simulated monocular diplopia. While adapted as a test for this condition with most patients, it is by no means absolutely reliable; it has failed in our own hands to detect simulation which was easily discovered by A. Graefe's method. So far as we know, the only reliable tests for binocular fixation is that of Hering.

The Transactions of the Pathological Society of Manchester. Vol. I. (Session 1891-92.) Edited by T. N. KELYNACK, M.B. Manchester and London: John Heywood.

THIS volume is issued in accordance with a resolution adopted at the Society's annual meeting held in October, 1891, "that Transactions of the Manchester Pathological Society be published," and the value and interest of the communications it contains prove most successfully the wisdom of that resolution. An introductory historical sketch of the Society and of its relations with other Manchester medical bodies, is given by Dr. Harris, the hon. secretary. There are included also copies of the roll of members (over 170), and of the "laws and regulations." From the last mentioned we make the following quotations as likely to be of special interest to those connected with kindred societies out of Manchester:—"The business of the ordinary meetings shall be the exhibition and examination of specimens, drawings, casts, models, and microscopical preparations of morbid parts, with accompanying written or oral descriptions, and the discussion of pathological subjects." "In the remarks made in reference to specimens exhibited, all discussions on abstract points shall be, as far as possible, avoided; and the topics of diagnosis and treatment shall not be introduced farther than is necessary to illustrate the pathology of the subject." "Ordinary members shall be legally qualified practitioners of medicine, or licentiates in dental surgery, or legally qualified members (by examination) of the Royal Veterinary Colleges, or persons distinguished in other departments of science connected with medicine."

Comparative pathology is represented in the present collection by contributions on "Aortic Aneurism in a Seal," "Equine Tuberculosis," "Bovine Suppurative Pericarditis," "Abnormal Bladder in the Horse," and "Bovine Tuberculosis." It would lead us too far to analyse in detail the proceedings of the various meetings. We need only say that specimens described have been connected not only with diseases coming under the spheres of general medicine and surgery, but also with such as are commonly referred to the various specialties. Many of the rarest affections have their pathology thus illustrated.

The volume is rendered the more available for handy reference by the excellent manner in which the various papers are arranged, by the clearness of the type employed, and by the copious and distinct index appended.

A Short Manual of Orthopædy. In Five Parts. By HEATHER BIGG, F.R.C.S.Ed. Part I—"Deformities and Deficiencies of the Head and Neck." London: J. & A. Churchill.

THIS work, the author announces in the preface, is intended both for the lay public and the medical profession.

As an example of ostentatiously technical verbiage, we can conceive of its impressing a portion of the lay public—such phrases as "sanguineous fluid," persistently employed for blood, and such sentences as "peripheral spasmodic wry-neck ensues from some injury to, or irritation of, the distal efferent portions of the neuro-muscular elements," with many others similar in style, being well calculated to capture the attention and arouse the admiration of a certain order of intellects.

As a work intended in any reality for the profession, we find it impossible seriously to regard it. Pathological facts and theories in explanation of symptoms, or in suggestion of treatment, are conspicuously absent; whilst the author's personal opinions are confidently dogmatised upon as accepted facts.

The scientific value of the subject matter of the book may perhaps best be estimated by the examination of a sample. For instance, deformities of the neck—those of the cervical vertebral column being specifically excepted—are classified as follows, a distinct section of the book being denoted to each class:—"Cicatrices of the skin, drop-head, fractured neck, cicatricial wry-neck, neuro-muscular wry-neck, spasmodic wry-neck, central spasmodic wry-neck, neuro-mimetic wry-neck, hysteric wry-neck, peripheral spasmodic wry-neck, paralytic wry-neck, purely muscular wry-neck, accommodative wry-neck, operations for wry-neck, appliances for wry-neck.

The subject of wry-neck having been thus successfully elaborated into the above list of imposing, albeit, in our opinion, useless and absurd terms, the author closes his classification of deformities of the neck without the most remote reference to that important and interesting group having their origin in faulty closure of the branchial clefts, or to the cysts, dermoid and serous, arising not infrequently in connection with the process of otherwise normal closure of these clefts, and without mentioning the deformities caused by the various tumours which may develop in the neck, notwithstanding the fact that he describes the deformities due to the different tumours of the cranial vault and face in discussing these regions.

This volume merits so much attention as we have bestowed upon it mainly, if not solely, for the reason that it is the first of a series of five.

Quain's Anatomy. Tenth Edition. Vol. II. Part II: Arthrology, Myology, Angeiology. Edited by G. D. THANE. London: Longmans, Green & Co.

PROFESSOR THANE is to be congratulated on the successful conclusion of an important portion of his labours. In the departments taken up in this volume, *Quain's Anatomy* has always enjoyed a very high reputation. We know of no work in the language in which the details of human anatomy are treated of with so much practical accuracy on the one hand, or on the other, with so much regard to their scientific or morphological bearings. It has come to be regarded as the unrivalled authority in this country, and it is pleasing to note that the latest edition fully maintains the high standard which has been achieved in the past. During the last few years very little original work, in the fresh elucidation of anatomical detail, has been done in connection with the departments with which this volume is specially concerned, but a considerable amount of attention has been paid to the morphological problems. While much advance cannot reasonably be looked for in the descriptive anatomy of the muscles and blood-vessels, it is undeniable that in the subject of the joints, and in that of the lymphatic system, much yet remains to be done. Under the circumstances, Professor Thane has, very wisely we think, refrained as much as possible from altering the text of the descriptions; while he has incorporated, if not all, at least the greater part of what is important in more modern research.

The main feature of the present volume is the presence of a number of new plates which, in clearness, compare very favourably with those by which they are surrounded. There are between thirty and forty of these, and they are chiefly from the pencil of Professor Thane himself. The more important of them illustrate the anatomy of the knee-joint, the ligaments of the vertebral column, the fascia of the pelvis, the heart, and the blood-vessels of the base of the brain.

The chapters on the morphology of the muscles and the blood-vessels are very interesting, and replete with the records of the most recent work—indeed, if we have any fault to find with Professor Thane, it is that he is occasionally almost too conscientious in detailing all the differences of modern opinion. Doubtless the special worker who is devoting for the time his energy to one department will be thankful, as it will relieve him of a considerable amount of labour in becoming master of the literature of his peculiar subject of study. But the student is apt to be led into difficulties, with the solution of which he is not in a position to deal. As an example of this may be mentioned the conflicting views as to the morphology of the common iliac and middle sacral arteries, the more modern of which, we believe, has hardly as yet received sufficient embryological confirmation to justify its being put prominently forward before the student.

The work which has fallen to the publishers has been done in a manner to leave nothing to be desired.

Elements of Pharmacy, Materia Medica, and Therapeutics. By W. Whitla, M.D. London: Henry Renshaw. 1892.

This is undoubtedly one of the best of the numerous text-books on materia medica and therapeutics. Its popularity is shown by the fact that the present is the sixth edition which has been issued in the short space of eleven years. Besides the sections dealing with the official remedies, and with the actions and uses of these, the book contains useful chapters on Pharmacy and Prescription-writing, so that the student has in one handy volume everything he needs for the study of medicines, their preparation, the forms and combinations in which they may be prescribed, and the circumstances in which they may be usefully employed. In his preface, the author regrets "the ever flowing tide of new remedies which already seriously threatens to retard the proper study and true progress of therapeutics." We quite sympathise with this view, and think he might do something to lessen the force of the tide by omitting from his chapter on non-official remedies a considerable number of substances he has thought worthy of inclusion. Certainly many of them "never would be missed." The volume is well up to date, and the practitioner, not less than the student, will find it a useful one to place in his library.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1892-93.

Meeting V.—16th December, 1892.

Medical Section.

The President, Dr. Joseph Coats, *in the Chair.*

I.—ON THE TREATMENT OF MYXŒDEMA.

By Professor M'Call Anderson.

Dr. M'Call Anderson has published his paper in full in the *Practitioner* for January, p. 36, and it is sufficient to give merely a short abstract of it here. After referring to the fact that it was only within a comparatively short time that the treatment of myxœdema had been at all satisfactory, he related a case which had been under his care in 1884, and in which great benefit had been associated with the use of the following remedies:—"A mixture containing strychnine and arsenic was prescribed, and she was shampooed daily for half an hour. Every third day, in rotation, she had—first day, a vapour bath; second day, one-quarter grain of pilocarpine subcutaneously; third day, a hot electric bath for half an hour. Each of these procedures made her perspire profusely." Proceeding to discuss the most recent method of treatment, by administration of thyroid gland or thyroid extract, he considered it as complemental to the other methods, such as above indicated, there being no reason "why they should not be carried out simultaneously." The success of the recent method had been wonderful, and he had a case to record which formed a good illustration of that success. His patient, M. J. C., æt. 30, had been admitted to the Western Infirmary on 18th August, 1892, and she had then presented the general signs of myxœdema. On 16th September a mixture, containing tincture of steel and solution of arsenic, had been prescribed, and some improvement had taken place in regard to the anæmia and the temperature, before the administration of thyroid juice was added to the treatment on 31st October. "A bottle of Dr. Murray's extract, prepared by Messrs. Brady & Martin, and containing about 80 minims (two-thirds of an extract of one thyroid), was sent weekly from Newcastle, and of this a fourth part was given by the mouth on four consecutive days, after which an interval of three days elapsed before any more was administered." Very soon a decided change for the better had been manifest in the face and in the skin all over the body; the mental condition had also improved, and menstruation, which had previously been very decidedly abnormal, had become regular and not excessive in quantity. The recovery seemed, indeed, to be satisfactory in every respect, and patient now considered herself to be quite well. She was shown by Dr. Anderson to the meeting, along with photographs, which illustrated her progress, and which are reproduced in the number of the *Practitioner* quoted above.

Dr. Anderson indicated his decided preference for the administration of the remedy by the mouth as distinguished from its subcutaneous use, in the latter connection quoting Dr. Napier's paper in the *Glasgow Medical Journal* for September, 1892.

His conclusions on the general question of the use of the thyroid in myxœdema he expressed thus:—"It would be premature to speak positively with regard to the curative effect of this new remedy. That it gives great relief, and dissipates all the unpleasant symptoms in a comparatively short space of time, is now placed beyond doubt. But the evidence, so far, tends to the conclusion that, after the treatment has been suspended for a time, there is a tendency to a recrudescence of the symptoms. And, in the nature of things, this is what we might reasonably expect, seeing that an atrophied thyroid is as little likely to be restored as an atrophied testicle. But even if it is necessary for patients to swallow a dose of the extract once a week for the rest of their lives, this is no greater evil than falls to the lot of many healthy persons of having permanently to resort to the use of aperients for the relief of chronic constipation, and this is borne with equanimity. So that, from whatever point of view we regard it, there can be no doubt that a very valuable new remedy has been discovered for the relief of a very serious disorder, and one which may pave the way for similar discoveries in other fields."

Dr. Napier was unavoidably absent, but the Secretary showed, on his behalf, photographs and chart of the case of Mrs. M'G., whose history up till the 12th of October is recorded in the *Glasgow Medical Journal*, November, 1892, p. 382. The following supplementary notes regarding her were also read:—

"*26th October.*—Seventh injection: patient's general appearance has improved, there being more brightness about face. Intellectual condition much improved. No fever after any of the injections.

"*30th October.*—Ninth (and last) injection.

"*1st November.*—Treatment by injection stopped. Thyroid now given by stomach, one half gland being administered daily, raw, finely chopped, and stirred in a cupful of cool soup.

"*6th November.*—Since thyroid has been given internally, patient has complained of vague but severe painful sensations in abdomen, back, and limbs. There is marked muscular debility, and patient is much less able to walk. Considerable pain on sitting up in bed, and on making pressure over spine from about third dorsal to lower lumbar vertebræ. Skin everywhere much softer and looser.

"*21st November.*—Patient dismissed, very much improved.

The thyroid gland was at first given daily, but afterwards every second day. Five half thyroids were given in this way.

"The chart shows that the entire course of the case was a-febrile. The photographs show the falling off in the patient's bulk, and the disappearance of the fulness about neck and above clavicles. The change mentally and in speech was most striking, the patient having become active in mind and able to talk with usual rapidity and ease.

"The increased excretion of urea, as noted in the chart, is another striking effect of the thyroid in myxœdema. The malar flush has much diminished, and the skin everywhere is loose, soft, and moist. Salivation has disappeared, and taste in mouth is normal."

Dr. M'Laren, after expressing his indebtedness to Dr. M'Call Anderson for his interesting communication, said that, to judge from the papers appearing in the medical journals, he did not suppose that there was any disease which was awakening so much interest at the present time as myxœdema. He could confirm, from his own experience, the results from treatment related by Dr. Anderson, as he had recently had two cases in which the improvement had seemed to him little short of miraculous. He had never seen any remedy produce such marked results in any disease before. His (Dr. M'Laren's) cases had been treated by thyroid alone—apart from baths, &c.—so that there was no doubt as to what was the reason of their improvement. His previous experience of myxœdema had been that no remedy did any good, though Dr. Anderson seemed to have obtained benefit from certain drugs (strychnia, &c.) and from baths; but now Dr. M'Laren felt that there was a well-grounded hope that they had a treatment which would be useful. His two cases had been ill for some years: they were ladies of 55 and 68 years of age respectively. In one case, which was under Dr. Fred. Pollock's care, an extract had been used, and 2¼ thyroids altogether had been given. The remedy had been given by the mouth. He had made up his mind that he would not try this method of treatment so long as subcutaneous injection was the plan; but when he had read that the same effects were produced by administration by the mouth, he had tried it at once. Whether the good results which had followed would continue or not, he could not say—there might be a relapse; but at present the change was extraordinary, the face being so changed that the patient could with difficulty be recognised as the same woman, and improvement being equally marked also in other respects. After the third dose there had been a very high fever, temperature rising to 103°, with aching pains and other alarming symptoms. They had then stopped the administration for a time. In the second case an epileptic fit had occurred, but whether these results were caused by the remedy or not he could not say. The second case he had seen with Dr. Haldane, of Bridge-of-Allan. In it half a thyroid had been given twice a week—raw, minced and mixed with collops, which had been cooked as usual. The patient thus did not need to know that she was taking it.

Dr. M'Laren knew of no parallel in medicine to the phenomena they saw in connection with myxœdema. A thyroid disappeared by disease, and various symptoms were noticed. Thyroid was then given by the mouth, and the symptoms disappeared. The thyroid had once been regarded as of little importance in the economy, but now it was seen that one could not do without it. It had been so also with the supra-renals; they had been despised till Addison had directed attention to their pathology. It was extraordinary that myxœdema had been so long overlooked. Cases must have been occurring long before Sir William Gull and Dr. Ord wrote upon the subject, but it was only after attention had been directed to the disease that medical men recognised them.

Dr. Charles Workman had had a case of myxœdema under observation for the last four years. She was 43 years of age, and was now enormously swollen, the swelling involving the cheeks, jaws, trunk, thighs, and arms; the feet and legs, and also the hands had almost entirely escaped. There was no pitting on pressure, and no albuminuria or other sign of renal disease. From a photograph which he had seen, it was evident that when younger she had been thin and of light build. One peculiarity of the case was that she had tachycardia; he had counted the pulse recently at 132. There were also various heart symptoms, such as palpitation, and turns of fainting and of dyspnœa, for which she had found benefit from strophanthus; amyl nitrite had also done good when the attacks of dyspnœa came on, but he had tried arsenic, iodide of potassium, quinine, and other drugs, without any relief as regards the myxœdema. He had been determined not to use thyroid subcutaneously, but, on hearing of its use by the mouth, he had had one prepared (by Macmillan) with glycerine and a small quantity of carbolic acid. Half had been taken on the 14th, and the other half that day (16th). As yet he could not speak as to any result but this, that, after the first dose, the patient had felt very unwell, and as if she had a bad attack of bronchitis.

Dr. Workman was still very sceptical about the value of the administration of thyroid in myxœdema, but was determined to give it a trial.

Dr. Caldwell Smith spoke of a case which he had seen seven or eight years ago without knowing what was wrong with the patient, but which he had since recognised as myxœdema after reading Sir William Gull's description of that disease. The symptoms were as characteristic as in Dr. Anderson's case, and he intended using thyroids in the treatment of it. He could remember now, also, another case which he had seen, as a boy of 14, in which the appearances had been exactly similar. There was no other disease in which the external symptoms were so manifest and striking.

Dr. Renton considered the subject of Dr. Anderson's paper to be one of the most interesting things that had come before the profession for a long time. He had shared the anxiety, which had been already expressed, about the use of subcutaneous injections, and in conversation with Dr. Bramwell had heard that those injections had been followed in some cases by alarming symptoms; but when he saw that preparations of the thyroid could be given by the stomach, he felt that they were getting to a rather safer method of administration. Happening to meet Dr. Haldane, he had heard from him of the plan followed in the second case to which Dr. M'Laren had referred. Dr. Renton had then told the friends of a patient suffering from myxœdema to procure the gland from the butcher, and use it in a similar way. There had, however, been some difficulty in getting the butcher to understand what was wanted, and at first they had had to import thyroids from Bridge-of-Allan. Half a thyroid had been given on a Monday, and the other half on the Thursday, and he could assure members that if ever a patient improved with anything there was improvement here. She looked different and spoke differently; indeed, the effect appeared almost magical. It seemed, however, that too much thyroid had been given, for the pulse became alarmingly full and rapid, and angina-like attacks developed, but there was no rise of temperature. The quantity had accordingly been diminished, and now the patient was getting on all right, though what the ultimate issue would be he did not know. He would direct special attention to the importance of the dose employed.

Dr. Renton had noticed, in the reports of cases of myxœdema treated by thyroid, that where there had been anæmia the anæmia had disappeared. He raised the question as to whether benefit might be obtained by giving thyroid in cases of ordinary anæmia or of pernicious anæmia.

Dr. Fred. Pollock spoke of some practical points in connection with the first case referred to by Dr. M'Laren. In regard to the obtaining of the thyroid glands, he had found great ignorance among butchers, and in one gland which had been sent to him there was actually some cheesy pus, so that the medical man ought carefully to supervise the supply of thyroids. His plan was, having procured a thyroid, to have it cleaned and then triturated by the chemist with a drachm of glycerine, and subsequently with a second drachm of glycerine; glycerine should then be added up to an ounce, and the whole passed through a strainer; another ounce of glycerine should then be passed through the strainer. Practically, the thyroid was found to disappear in the glycerine. Half an ounce of the preparation (*i.e.*, one quarter of a thyroid) was the quantity first given, but that had proved too much, as Dr. M'Laren had already mentioned. The unpleasant symptoms, which he had related as following the third dose, had begun with a feeling of stretching in bed, the patient thinking she was beginning to grow; severe aching pains had followed—felt all over the body, but especially about the ankles and below the scapulæ; in the latter situation the feeling was one of being scorched. The patient was a rheumatic subject, and perhaps the pains might thus, in part at least, be explained, though when the treatment had been stopped the pains disappeared. These pains had been accompanied by profuse perspirations, and Dr. Pollock had thus been struck with the idea that the thyroid might be acting as jaborandi did. The perspirations, however, stopped after a time, and it was only when they did so that the extraordinary difference in the patient's general condition was noticed, although slight improvement had been noticed even before. The fourth and succeeding doses were only of two teaspoonsful, and somewhat similar symptoms followed, but they were not nearly so severe as when half an ounce had been given.

The change had left the lady very weak—whether on account of the treatment or not he could not say—and she was still very anæmic.

Dr. Walker Downie had seen some cases of myxœdema in view of throat symptoms, there being thickening of the fauces and of the walls of the Eustachian tubes, which had resulted in one case in dulness of hearing and noises in the ears. In two of the cases (which had been seen by Dr. Ord) the use of pilocarpine, which had been recommended, resulted in somewhat alarming symptoms. In one case the patient was seized with an epileptiform convulsion after the first injection, while in the second case the injection was followed by a severe rigor, and this by a state of collapse with partial unconsciousness, which continued for a very considerable time. He thought these occurrences interesting in connection with the complications which had been mentioned as following the use of the thyroid gland.

Dr. M'Laren added that in his Bridge-of-Allan case there had been stridor, which Dr. Hunter Mackenzie had said was due to a myxœdematous condition of the throat. It had now disappeared. In both of his cases there had been quickening of the pulse, but it had come down in a few days after the treatment was stopped.

Dr. D. C. M'Vail stated that a medical friend who had been using the thyroid had been having the gland cooked, heating it to a temperature sufficient for grilling or boiling ordinary meat, and that he had still found it effective. This was not to be wondered at, considering the changes which must in any case take place in the stomach.

Dr. Coats spoke in regard to the question of the permanency of treatment, which had been raised by Dr. Anderson in view of the disease, myxœdema, being due to atrophy of the thyroid. It was now generally admitted that the pituitary body had the same function as the thyroid, and a compensatory hypertrophy of the pituitary body had been found in cases of thyroid affection. If, then, they could, by the administration of thyroids, restore the patient to health, and keep the health good until the pituitary body could thus hypertrophy, the cure might be permanent apart from continued treatment. He considered that the discussion had been a most interesting one, and conveyed the thanks of the meeting to Dr. Anderson for his paper.

Dr. M'Call Anderson, in reply, dwelt on the importance of being absolutely sure of the diagnosis of myxœdema before commencing treatment by thyroids; otherwise that form of treatment would be sure to fall into discredit. One should always begin with a small dose; that point had very properly been emphasised during the discussion. In a good many of the cases spoken of, half a thyroid had been given; he had given only one-fourth of two-thirds of a thyroid at stated intervals (see above), and he had had not a single symptom except improvement. He did not consider the thyroid itself, cooked or uncooked, so convenient as the extract he had used.

In conclusion, he would only express the hope that gentlemen who tried treatment by thyroids would be as thoroughly satisfied with it as he had been.

II.—CONGENITAL ABSENCE OF ULNÆ.

BY DR. J. HOGARTH PRINGLE.

The committee appointed at the meeting of 2nd December to make further examination of Dr. Pringle's case handed in their report. It is appended to the following abstract of the account of the patient's condition, which Dr. Pringle gave on showing him to the Society. The case has been published in full in the *Journal of Anatomy and Physiology.* In the short discussion which took place in connection with the committee's report, it was agreed that any difference of opinion on minor points of detail could be settled only by dissection.

Abstract of Dr. Pringle's Report.—Patient, aged 31, is the seventh member of a family of nine. None of the others, nor any of their relatives, suffer from any deformity.

Right upper extremity.—The hand is provided with three fingers, one, which is well developed, being the middle finger, with one to its radial side, apparently the index, and one to its ulnar side, apparently the fifth. There is no trace of ring finger or its metacarpal bone; a distinct gap exists between the metacarpals of middle and little fingers. The lower end of the radius is rather wider than normal, and seems to end in two styloid processes. The upper extremity is united to the humerus by osseous anchylosis. No trace of the ulna is made out. The triceps seems to be represented by the long head only. The muscles about the shoulder joint are well developed.

Left upper extremity.—The left hand also has only three fingers, the best developed of which seems to be the index. On its radial side is a rudimentary thumb not articulated to any bone. The third digit present is apparently the middle finger, which is maintained in a state of flexion. The radius is much the same as on the right side. No trace of the ulna can be made out.

There is no deformity of the lower limbs. Patient is the subject of advanced right-sided scoliosis.

Report by Committee.—"We, the committee appointed by the Medico-Chirurgical Society on 2nd December to consider the case of 'Congenital Absence of the Ulnæ,' submitted by Dr. Pringle on that evening, and to report thereon, beg to report that we have examined the patient, and consider Dr. Pringle's report minutely accurate in all its details. The only doubts we have are as to the identification of certain of the rudimentary bones, viz:—

"1st. Whether the rudimentary digit on the radial side of the right hand is not the thumb.

"2nd. Whether the fully developed digit on the left hand is not the middle finger.

"3rd. Whether the projection on the ulnar side of the wrist on both arms is not the lower end of the ulna firmly fused with the radius.

(Signed) "HENRY E. CLARK.
" "JOHN BARLOW.
" "THOMAS H. BRYCE.

"GLASGOW, *5th December, 1892.*"

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

SESSION 1892-93.

MEETING III.—12TH DECEMBER, 1892.

The President, DR. SAMSON GEMMELL, *in the Chair.*

I.—SCROFULODERMA VERRUCOSUM: DEMONSTRATION OF THE TUBERCULAR NATURE OF THE LESIONS.

BY DR. JOSEPH COATS.

Dr. Coats showed, as a fresh specimen, a leg which had been amputated by Professor George Buchanan in a case named by Professor M'Call Anderson *scrofuloderma verrucosum.* It presented, Dr. Coats said, the appearances in many aspects of elephantiasis and also, as Professor Buchanan had pointed out, the appearances of leprosy. It was thus interesting to have, as it were, in the specimen those three diseases grouped together—elephantiasis, leprosy, and tuberculosis, scrofuloderma being tuberculosis of the skin. On examination the leg was found to show various ulcers, but also a pachyderma and, further, a number of localised warty prominences, on account of which last-mentioned growths the adjective *verrucosum* was chosen. Sections had been made of the skin in affected parts, and one of these was shown under the microscope. Tubercles of typical structure had been found, and there could thus be no doubt of the nature of the disease present. There had also been found at certain places a more general inflammation, and the pachydermous parts consisted of a hyperplasia of the skin, due to soakage of the tubercular poison from the more typical tubercular lesions. The fact that elephantiasis was essentially a pachyderma was quite consistent with the fact that it and leprosy were due to morbid poisons. In answer to various questions, Dr. Coats stated further that the patient was a woman, about 30 years of age, and that the disease had begun as a lupus in her face.

Dr. Coats had had the sections prepared by a modification of a method of which he had read in a recent number of the *Centralblatt f. Bacterienkunde*—viz., by hardening in alcohol and then immersing in anise oil before freezing. This oil solidified at a comparatively high temperature, even in presence of alcohol, and, with the expenditure of very little ether, formed a firm block on the freezing surface of the microtome, and one could then easily cut the sections. The danger was thus avoided of having specimens which had been in alcohol spoiled by first soaking in water and then reducing the temperature to the point usually required for freezing. It was not necessary to soak in the anise oil for twenty-four hours, as recommended in the paper quoted; removing superfluous alcohol by blotting-paper, and then freezing in the anise oil was quite sufficient. By this method it was possible to make large and thin sections of structures after as short a time as twenty-four hours' hardening in alcohol.

II.—SPECIMENS AND MICROSCOPIC PREPARATIONS FROM A REMARKABLE CASE OF MULTIPLE TUBERCULAR TUMOURS OF THE BRAIN, LIVER, MESENTERY, ETC.

By Dr. Middleton.

Dr. Middleton showed a number of specimens from this case, and also sections from various parts demonstrating the tubercular nature of the growths. His report of the clinical history and *post-mortem* examination is to be published in the *Lancet*. The points upon which he laid special stress were—(1) the condition of the liver, the tumours there being so large as to give the organ an appearance suggestive of malignant disease; and (2) the fact that the brain was found occupied by a multitude of tumours, involving both motor and sensory centres, and in some parts causing considerable destruction of tissue, although cerebral symptoms had been absent during the long period the patient had been under observation, meningitis having been diagnosed only a few days before death.

The patient was three years of age at death.

Dr. Coats said that the case was a very unusual one, and perhaps the most unusual feature was the condition of the liver. Tubercular tumours in the brain were often multiple, and often shelled out, as Dr. Middleton had described, because of the loose bed in which they lay; but the presence of multiple considerable tubercular tumours in the liver was very rare, and he did not think he had ever seen anything like it. Such tubercular tumours did occur in the livers of some animals, such as the guinea-pig and cattle, but the liver of man presented a contrast in this respect, and seemed to be inimical to the growth of tubercle, the tubercles there being as a rule minute. Possibly the livers of children might form an easier place of growth, and the age of Dr. Middleton's patient might account for the condition found in this case.

Dr. Lindsay Steven agreed with what had been said by Dr. Middleton and Dr. Coats in regard to the rare nature of the case, in so far at least as the liver was concerned. He did not recollect ever to have seen a similar one. It had struck him during recent years that probably a more wide-spread and extensive tuberculosis of all the organs occurred in children than in adults. Recently he had reported a case with seven or eight tubercular tumours in the brain, and similar growths in other organs, and he had had another case with tubercular masses in all the organs—even in the heart, a mass of the size of a large green pea having been found in the myocardium, and having shown typical tubercles on microscopic examination; in this latter case the liver also had been affected, but the tubercular growths there were not at all of the size spoken of by Dr. Middleton. Such cases, and others he had seen at the Sick Children's Dispensary, had led him to adopt the view he had just expressed in regard to tuberculosis in children.

Dr. Hugh Thomson spoke of the importance of examining the lymphatic glands for early evidence of tuberculosis, and referred to remarks he had made on that subject as reported in the *Glasgow Medical Journal* for December, 1891, p. 447.

Dr. Middleton, in reply, said that the pathological interest had seemed to centre in the liver. The tumours there had been thought at first to be adenomata, but tubercles had subsequently been found. He would be glad if Dr. Coats would examine further specimens from that organ, and give his opinion upon it. He would have liked to have had some expression of the views of members as to the absence of cerebral symptoms.

Dr. Coats thought that in childhood the brain was in such a distensible case that the presence of tumours did not necessarily produce much effect.

Dr. Middleton pointed out that on account of the many important centres here involved, symptoms would have been expected, but *Dr. Coats* and *Dr. Steven* both thought their absence not unusual.

III.—SPECIMEN OF PAPILLOMA OF THE BLADDER.

By Dr. Hector C. Cameron.

The patient from whom Dr. Cameron removed the tumour shown was a man of 27 years of age, and married. Bleeding began in February, 1891, and, though not very bad at first, it had been becoming gradually worse. It had been of two kinds:—(*a*) At the end of every act of micturition, two or three drops of pure blood were passed; and (*b*) at intervals, never longer than a week, a severe attack of hæmaturia took place. Early in the case there had been, curiously enough, a constant pain over the right renal region, which might have led one to infer that the blood was coming from the kidney. In August last fleshy fragments had been passed, and had been examined by Dr. Lindsay Steven and Dr. T. K. Monro, and thought by them to indicate the presence of a papilloma. Though at last very anæmic from the continued loss of blood, patient had continued at duty till three weeks before the 15th of October, when he was admitted to the Training Home for Nurses. On the 21st he was examined with the cystoscope, and the tumour distinctly seen. On the 25th suprapubic cystotomy was performed, and, on introducing his finger, Dr. Cameron had at once felt the tumour, and detected that it had a very long pedicle—about as long as the little finger—which thus allowed very free movement of the tumour in the bladder, and made it possible to bring the tumour to the mouth of the wound, though the attachment of the pedicle was to the base of the bladder. The pedicle was, besides, round and smooth, very substantial, and apparently very vascular. Dr. Cameron had tied it with a Staffordshire knot, and then removed tumour and part of pedicle by simply cutting the latter across; a drainage tube had then been inserted, and the free end of the ligature kept out through the wound. At the end of a week the ligature had come away with a little slough—part of the pedicle. The patient had then continued to make good progress for a week or two, when there was a sudden rise of temperature to 104°, without rigor, but followed by profuse sweating. An enormous quantity of pus and a little blood had then been passed by the urethra, obviously from an abscess somewhere, and that probably in the bladder wall. Thereafter he had been very well.

Dr. Cameron referred to another case of distinct villous tumour which he had seen twelve or fifteen years ago. Now-a-days, that patient also might have been relieved as the one now reported, but he had died after great suffering, and the specimen had been obtained *post-mortem.*

Dr. Rutherfurd described microscopic specimens which he had prepared, and which were shown. In one of these the papillomatous structure was quite visible to the naked eye. The dendritic processes were covered by a stratified epithelium many layers deep. At the tips of the papillæ they might see under the microscope clear round spaces, evidently lymphatic, and these corresponded to the appearance seen by the cystoscope, and also immediately after removal. The tumour had then presented a much more succulent appearance than after preservation, and the tips of the papillæ had been tense and glistening, and suggesting a comparison to a bunch of grapes or a hydatidiform mole.

IV.—MASSES OF PROSTATIC TUMOUR, REMOVED BY THE SUPRAPUBIC OPERATION.

By Dr. Hector C. Cameron.

The patient in this case was a man of 49, who had first been operated on on the 29th October, 1890. For the preceding eight years he had suffered greatly from bladder trouble with constant severe hæmaturia. About two years before the first operation he had been sounded by a surgeon: no stone had been detected, but this was not to be wondered at considering the condition of the prostate. In the beginning of October, 1890, Dr. Cameron had sounded, and the instrument had, as it slipped in, struck upon a stone. Suprapubic lithotomy had been performed on the date mentioned, and on opening the bladder one or two calculi had come into view, and also two large tumours protruding from the prostate into the bladder, the mucous membrane of the bladder being very much inflamed. The tumours had then been ulcerated and fissured, and one had been noticed flattened. Behind, in a pouch near the rectum, thirteen calculi had been found, and were now shown.

Recovery had taken place after this operation, and the patient had gone home in five weeks.

For a year he had continued fairly well, although pus was constantly present in the urine; probably it came from the surface of the tumours as well as from the general mucous membrane. In October, 1891, there had again been a bad attack of hæmaturia, and such attacks had recurred once a month till September, 1892, when the patient's condition had been very serious: his bladder had become distended by clots, and the urine could be drawn off only with great difficulty. When seen by Dr. Cameron again at this time he had not slept for about a week; when urine did at length come through the catheter he (Dr. Cameron) passed, it was stinking, and the bladder was tympanitic. On 22nd October, 1892, the bladder had been opened the second time by suprapubic operation. Stinking clot had then been found, but no more calculi; the tumours had then been a good deal larger than when first seen, but not ulcerated though very red-looking. To have taken them away at that time, with the condition of urine described, would, Dr. Cameron felt, have been fatal. A tube had been instead put in, and by it the bladder had been washed out regularly afterwards till its condition became satisfactory; meantime, also, the patient's health improved wonderfully.

On the 6th December they had opened into the bladder again and found the tumours quite different—white and glistening, and with a fleshy appearance like fibromata of the uterus, partly overhanging their base, but not pedunculate. They had been removed, each in two pieces, by the écraseur. There had been some oozing from the cut surfaces, but it had ceased when, on Dr. Rutherfurd's suggestion, they had emptied the rectal bag they were using, and which seemed to have caused congestion. On the evening of the day of operation the urine had been free from blood. The temperature two days afterwards had been 100°, but for the last three days (preceding 12th December) had been normal. The patient felt perfectly well, and seemed certain to make a good recovery.

[*17th January, 1893.*—Convalescence was quite satisfactory, and patient is now well and has returned to the country.]

There were several points to which Dr. Cameron desired to draw attention:—

(1) The suprapubic operation had been performed three times upon this patient; he did not know of any case similar in that respect. He had done a third perineal lithotomy upon one patient, and in pulling out the stone had felt something give way. On putting in his finger, he had found that it was

the wall of the rectum, which had been adherent to a former cicatrix, and been torn. It had healed up well. When a second suprapubic operation had to be performed there would be similar danger to the peritoneum, which was here apt to get involved in the cicatrix. In a former case in which he had had to perform a second suprapubic lithotomy, he had opened the peritoneum, but in the present case he had adopted a suggestion that it would be better to begin with a transverse incision along the pubes, and then have just a short one at right angles to this. This was a better plan than to follow the old cicatrix.

(2) He had never before removed prostatic growths, but he knew of cases in which that had been done, and the patients had all died of septic infection, and he was certain that if he had removed these either at the first or at the second operation, this patient would have died. By waiting here they had had many advantages; they had a guide into the bladder for the final operation; they had the patient in much better condition, the bladder smaller and healthier, and the tumours also in a much more favourable state. He was certain that it was because of this waiting that they had had such a happy result, and he thought that the proper procedure in any case of prostatic growth with stinking urine (and the urine was stinking in nineteen out of twenty) was to do a cystotomy, and examine the tumours to see if they were negotiable, and supposing an operation for their removal seemed possible, then to wait and perform it subsequently.

(3) As to the tumours which are found in the prostate, one might have hypertrophy without any outgrowth, and that was always unfortunate for operation by the bladder, or one might have incontinence of urine, &c., from a " bar " across the prostate, as the French called it, and that also was unfavourable for operation. Other cases occurred in which the swelling was mainly of the middle lobe, and projected as a considerable tumour in the bladder, being felt only slightly from the rectum; these were favourable for this operation. In connection with the classification of such tumours, Dr. Cameron quoted from a paper on tumours of the prostate and other organs published by Mr. Paul of Liverpool, and based on the results of a British Medical Association investigation. It was there stated that the majority of the prostatic tumours reported were adenomata or adeno-myomata.

Dr. Rutherfurd had examined the parts removed, but wished to make any report upon them subsequently. In the meantime, all that he could say was that he thought them myomatous, and that he had not been able to find any adenomatous structure. The epithelial covering was many layers deep, the upper layers being perfectly squamous, just like those of the skin.

[*21st December, 1892.*—Dr. Rutherfurd reports that the tumour tissue is mainly myomatous, with a certain amount of fibrous tissue. There are a few scattered groups of acini and ducts well-formed, and lined by a subcylindrical epithelium.]

Mr. Clark directed attention to the patient's comparatively early age, and, in reference to the enlargement of the middle lobe of the prostate, described as occurring often in old age, said that he doubted, from an anatomist's point of view, if the middle lobe were really a constant quantity. The prostate gland, to a considerable extent, was composed of unstriped muscular fibres, and was thus like the uterus, but the prostate contained more glandular tissue. This was important in view of the pathology of these organs. In uterine tumours the glandular tissue took very little part, but prostatic tumours were often adeno-myomatous, as had been mentioned, and he thought that Dr. Rutherfurd would probably find some adenomatous structure here on further examination. The prostatic gland, Mr. Clark thought, would yet come to be looked upon as the homologue of the uterus, this being already suggested by the accepted understanding of the *sinus pocularis.*

With regard to the operative treatment of these growths Mr. Clark had had little personal experience, but he knew that Dr. Mayo Robson had done most of his by enucleation. The present tumours looked as if that method would have suited for them, but probably Dr. Cameron had managed to leave less raw surface, and to escape the formation of a cavity in which urine might have accumulated had enucleation been performed: still, as it was now, Dr. Cameron had left some of the growth behind. The case appeared to have been a favourable one for operation from the size and shape of the tumours, but Dr. Cameron was most heartily to be congratulated upon his success.

It was interesting to notice that there had been more long continued hæmorrhage in the prostatic case than in the case of papilloma. The growths had been vascular, though after removal they looked ex-sanguine.

Dr. Renton spoke of having seen Professor M'Gill's cases at Leeds, and of having been greatly struck by his results. He considered that Dr. Cameron had cleared away one of the difficulties in connection with the treatment of prostatic growths by the subdivision of the operation. He would like to know, however, at what age Dr. Cameron would consider the operation justifiable. Dr. Renton had seen it performed once (without any subdivision), and to him it appeared too serious an operation for a man over 60 because of the danger of shock. The best way of removing prostatic growths seemed to him to depend on the individual case. He had seen successful cases of Dr. M'Gill's, in which there had been removal of a "bar," and others in which enucleation had been the plan. Dr. Renton also was familiar with hæmorrhage caused by the rectal bag.

Dr. Cameron, in reply, said that the age of his patient showed that the case was more one of tumour than of ordinary enlargement. After they had used the écraseur, enucleation had been spoken of, but there had not seemed to be anything very much to take away then. The suprapubic operation he considered to be safe; he had not had any deaths, and the ages of his patients had varied from 2 years to 70. It was the best way even for simply draining an old man's bladder, being better than the mesial perineal, because of the danger attending the latter from the presence of the catheter. Suprapubic examination was the best also for finding stones lying between portions of the prostate, and for ascertaining the condition of the prostate itself.

Dr. Rutherfurd pointed out that where the operation was subdivided, as Dr. Cameron had recommended, it would sometimes be unnecessary to perform the second stage, because of involution or retrocession taking place, just as it sometimes took place from drainage and washing otherwise. This had been already recognised, and was mentioned by Mr. Reginald Harrison in connection with subpubic puncture through the thickness of the prostate.

Dr. Cameron said that, in spite of the benefit of the first operation, patient's symptoms had recurred, and that they might have recurred again, even after the second, so he thought that the removal was perfectly warranted.

V.—SPECIMEN OF DEPRESSED FRACTURE OF THE SKULL OF MANY YEARS' DURATION.

By Dr. T. K. Monro.

This calvarium was taken from a man, æt. 71, who was recently admitted to the Victoria Infirmary with fractures of both bones of his right leg, near the ankle. He progressed favourably for about a fortnight, but when he sat up for the first time after the accident, he died somewhat suddenly, probably from failure of a large, fatty heart. At the inspection the bones of the leg showed no signs of union.

The interesting feature in the *calvarium* is the presence of a considerable depression at about the middle of the right parietal bone. This was caused by a blow with a bottle some thirty years ago. The man is said to have remained unconscious for three weeks after the injury, and whenever, throughout the remainder of his life, he was unwell or took drink, he became peculiar and wandered. No doubt the skull was fractured by the blow, but the specimen shows that the pieces of bone remained in contact all along their borders, so that the appearance is as if a portion of the cranium had been folded inwards. The depression is somewhat crescentic in shape, the outer border being curved with its convexity outwards, and the inner border nearly straight. The anterior end is about three-quarters of an inch from the middle line, and 1 inch behind the coronal suture. The long diameter passes backwards and outwards from this for 1⅛ inch. The greatest breadth is seven-eighths of an inch. The appearances on the inner table correspond pretty much to those on the outer, but along the ridge produced by the folding of the inner table, several rather sharp points are developed.

There was a depression on the *cerebral surface* corresponding with that in the cranium. This was situated over the upper parts of the ascending frontal and ascending parietal convolutions of the right side and part of the parietal lobe behind these. The brain tissue has not yet been examined microscopically, but it appeared healthy enough, except that perhaps the grey matter was unusually dark in colour. The *dura mater* was firmly adherent all over the calvarium.

Mr. Clark directed attention to the absence of epileptiform attacks, though the fracture was over the motor area.

Dr. Workman pointed out that it was on the right side of the skull.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

SESSION 1892-93.

MEETING II.—23RD NOVEMBER, 1892.

President, DR. ROBERT POLLOK, *in the Chair.*

I.—SPECIMENS REMOVED FROM AN UNMARRIED WOMAN.

BY DR. MURDOCH CAMERON.

Dr. Cameron showed a dermoid ovarian cyst, several small fibroids, and a uterus with a mass of small fibroids in its walls, all removed from an unmarried woman, aged 48 years.

II.—NOTES OF TWO YEARS' WORK AT THE WEST END BRANCH OF THE MATERNITY HOSPITAL.

BY DR. ROBERT JARDINE.

Dr. Jardine's paper is published as an original article at p. 32.

In the discussion which followed—

Dr. S. Sloan congratulated Dr. Jardine on the admirable report he had read. He thought the mortality of 1 in 200 was exceedingly low, considering the nature of the work. He preferred aseptic to antiseptic midwifery, and was glad to hear cleanliness was so strongly insisted on. He believed in absolute cleanliness, and always washed his hands with soap and water first, then perchloride solution, and finally rinsed them in pure water. He made the nurse do the same, and the same was done to the patient, and her breasts and vulva treated in the same way. He liked the idea of ending up the perchloride douche with warm water. He had never seen mercurial poisoning occur. He would not have called the fourth fatal case one of puerperal fever, as it seemed to him that the woman simply succumbed from the very low state of health she was in—bodily and mentally.

Dr. M. Cameron said it was rare to find the perineum tear from the anus, but a similar case had been reported to the Society by Dr. Turner. He believed the long straight forceps were very apt to plough up the perineum. The best treatment in septic cases was proper and frequent douching of the uterus with perchloride. In the pure form of septic absorption the woman often never complained of any abdominal pain, but merely of languor, slight headache, and vomiting. The lochia might not be foul. Peritonitis of a low form existed. Abortions and hæmorrhages, he believed, were very frequently due to syphilis. He had never seen a death from concealed hæmorrhage. He always interfered early in all cases of hæmorrhage. He thought the sanitary authorities should take charge of cases of puerperal fever, even if they did not remove them, as a medical man would have to give up doing midwifery while he had to look after such a case.

Dr. Richmond said the low mortality was very encouraging. The small number of placenta prævia cases and craniotomies agreed with his experience of twenty-five years' work. He had only had some two or three cases of puerperal fever, and he took no elaborate precautions, and used no antiseptics.

Dr. Miller remarked that years ago, when he was connected with the old Maternity Hospital, the mortality was much higher. He was surprised that the abortions had given so little trouble. He found that in private he had very frequently to interfere and clear out the uterus.

The President said he never gave ergot to assist labour, but frequently gave it just as the head was on the perineum. He considered he got better contractions, and had fewer cases of *post-partum* hæmorrhage and subinvolution. In severe hæmorrhage he never gave it, as he considered it had a very depressing action upon the muscular fibres, and might extinguish the efforts of a flickering heart. Douching with warm water after perchloride was a good suggestion. He preferred 1 in 80 carbolic acid to perchloride. In threatened abortions, when the contractions were rhythmic, he usually inserted a tampon, and in twelve hours, on removing it, in many cases found the complete ovum came away with it.

Dr. Jardine, in replying, said that he was not aware of there having been any more than five deaths. In a few rare cases the patients had absolutely refused to keep their beds, or do what they were told, so he had ordered the nurse to take nothing further to do with them. If any of these died he was not responsible. The fourth fatal case he had put down as due to puerperal fever, but he had had his doubts about it. Concealed accidental hæmorrhage he had unfortunately seen three times, and interfered in every case as early as possible, but to no avail. If he had another case he said he intended to try intravenous injection of a saline fluid. The abortions had certainly given very little trouble, and had mostly been managed by the nurse or students alone.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

MEDICINE.

By T. K. MONRO, M.A., M.B.

Paralysis of the Third Cranial Nerve as a Sequel of Herpes.—Schlesinger showed to the Viennese Medical Club a man, æt. 40, who had suffered from herpes in the left frontal region. A few days later there developed a complete paralysis of the common oculomotor. When the patient was exhibited there was still present anæsthesia in the distribution of the upper branch of the trigeminus, with insensibility of the upper half of the conjunctiva, inequality of the pupils, complete ptosis, and indeed palsy of all the muscles supplied by the common oculomotor. Herpes seems to have prevailed at the time in an epidemic fashion. Paralysis of the ocular muscles is a rare complication of this disease.—(*La France Médicale*, 4th November, 1892.)

Acquired Syphilis in an Individual suffering from the Inherited Disease.—(Taylor of New York, quoted in *La France Médicale*, 4th November, 1892). Taylor was consulted by a woman, æt. 19, married, and the mother of a healthy little girl of three years, on account of an ulcer situated on the right side of the nose. All the characters of this lesion, as well as the other symptoms, pointed to hereditary syphilis, and the result of treatment was to justify the diagnosis, the ulcer being completely cicatrised in two months. This woman was lost sight of for six months, and then she returned accompanied by her mother, who told how she and her husband had both been affected with syphilis, and how the patient, her daughter, had suffered in infancy from the usual early manifestations of the inherited disease.

Five years after the cure of the ulcer and other symptoms referred to, the same patient, now æt. 26, returned with abundant evidences of secondary syphilis, originating in a sore on the external genitals, which she had acquired from her husband. She was treated carefully, and afterwards became the mother of a child which remained in good health for two years.

This observation proves that a patient who, when æt. 19, suffers from the effects of hereditary syphilis incompletely treated in the earlier years of life, may, seven years afterwards, suffer from acquired syphilis. Cases of such a kind are rare. Bœck saw a child with hereditary syphilis, and saw the same individual again at the age of 18 with the acquired disease. Hutchinson has recorded two cases, which, however, are not quite conclusive. [Hutchinson relates *three* cases, which, on the whole, seem fairly conclusive. See his work on *Syphilis*, pp. 387-392.—Ed.] Lang has published the history of a patient who presented himself at the age of 35, with a typical hard chancre and enlarged inguinal glands. He had suffered till he was 18 or 20 years old from a severe form of inherited syphilis.

As to when the inherited malady ceases to protect against the acquired disease, we are not yet able to say.

M. Lancereaux on the Symptoms, Progress, and Treatment of Herpetism.—By herpetism the author understands a widely extended, vaso-motor, and trophic neurosis, which, without possessing any recognisable basis in morbid anatomy, is yet a very characteristic morbid entity. The individual attacked has generally a neurotic heredity. In early youth he suffers from prurigo and chronic urticaria, or even from purpura-like exanthemata. The itching associated with the cutaneous disorder is such as to disturb sleep. If such a patient, when young, has laryngitis, the symptoms of spasm set in very readily. In slight febrile attacks the tendency to convulsions shows itself. At puberty, incontinence of urine, involuntary seminal losses, epistaxis, hæmaturia, and bleeding from hæmorrhoids indicate the reflex and vaso-motor disturbances. Later on, there are blepharitis ciliaris, angina granulosa, acne vulgaris, but, above all, a particular form of dyspepsia, with heartburn and flatulence. The patient bears badly the most trifling diseases, and is of a melancholy turn of mind. After a time, trophic changes take place in the nails of the fingers and toes. Pityriasis capitis is often the precursor of premature baldness. The digestion begins to suffer about the twentieth year. There is either continual diarrhœa or obstinate constipation. A certain proportion of those who, as children, were thin and emaciated, begin now to add considerably to their body-weight. In such cases, the possibility of diabetes mellitus must be borne in mind. At the age of 40 to 45, rarely earlier, arthritic symptoms begin to show themselves, especially in the feet, but also in the hands. The articular cartilages are partly destroyed, partly converted into bone. Sometimes osteophytes are developed. At the same period of life, emphysema and bronchitis frequently set in. A decade later, arterio-sclerosis, with its results on the heart and brain, becomes a more prominent feature in the case.

The diagnosis is not difficult, even though all the symptoms are not present. The skin affections are always symmetrical and pruriginous (itchy); the joint affections are chronic, without acute exacerbations; and the arterio-sclerosis is always of universal distribution. The prognosis is by no means unfavourable, as severe symptoms only set in at an advanced age. Treatment is essentially symptomatic: for the nervous conditions—quinine, bromide of potassium, antipyrin, and morphia; for dyspepsia—diet and hydrotherapy; for diarrhœa—opium, nux vomica, and milk diet. If gross lesions are present in the joints, arsenic and iodide of potassium are indicated. Warm salt and sulphur baths are very useful at this stage of the disease.—(*Deutsch. Med.-Zeit.*, 3rd October, 1892.)

The Cremaster-Reflex as a New Phenomenon of Dyspnœa.—Leiblinger made his first observations on boys who were the subjects of capillary bronchitis or catarrhal pneumonia. The result of his investigation is to show that a very distinct cremaster-reflex occurs in association with expiratory dyspnœa in childhood. No stimulus is necessary beyond the respiratory dyspnœa itself; the reflex takes place only in expiration; it occurs with every expiratory movement, and without any paroxysm of coughing; it is called forth by the long drawn, gasping breathing, which makes the abdominal walls tense as a board, and compresses the abdominal viscera.

The cremaster-reflex was observed on both sides, and particularly in connection with the following affections:—(1) Capillary bronchitis, catarrhal pneumonia, and œdema glottidis, in which expiratory dyspnœa is at times present; (2) genuine miliary tuberculosis, in which, as a rule, paroxysms of coughing occur, with respiration at the rate of 40, 60, or even 70 per minute; (3) the last stage of phthisis, accompanying the most severe dyspnœa imaginable; (4) various forms of bronchial asthma; (5) emphysema, which may be associated with an extreme degree of expiratory dyspnœa.—(*Deutsche Med.-Zeit.*, 13th October, 1892.)

Conjunctivitis and Infectious Pneumonia.—M. Rendu was consulted by a patient of good general health with regard to a conjunctivitis of the left eye, with marked serous chemosis. There was no fever. He thought it a trifling affair, and prescribed some simple remedy. On the following day, however, he was summoned to see the patient, whose ocular trouble was somewhat aggravated, and who, in addition, presented a patch of erysipelas in the neighbourhood of the eye. Still there was no elevation of temperature or other general symptom, and there was nothing found in the nose or pharynx which could account for the erysipelas. This last, indeed, disappeared completely within 48 hours, but in the night following the third day of M. Rendu's acquaintance with the case, the general condition suddenly, and without known cause, became grave. A double pneumonia of the most infectious character speedily developed, and carried off the patient in 3 days. There was no cough, expectoration, or dyspnœa, though the physical signs were well marked on both sides. There was complete anuria for 2 days before death.—(*La France Médicale*, 16th December, 1892.)

Effusions of Hydatid Fluid and of Bile in the Peritoneum.—Debove and Soupault report the case of a young girl who was, on first admission to the hospital, regarded as suffering from tubercular peritonitis. An exploratory puncture gave exit to a greenish, oily fluid, with an appearance strongly suggestive of bile, which, in fact, chemical analysis proved it to be. Microscopic examination showed, in addition, a considerable number of hydatid membranes and vesicles with hooklets. The diagnosis was accordingly altered to one of hydatid cyst which had opened into the peritoneum, and was in communication with the biliary passages. This communication must have persisted for a considerable time, for fluid similar to that described above was withdrawn on three separate occasions.

Cases of this description have not long been recognised, and are interesting as showing how innocuous biliary and hydatid fluids are to the peritoneum.—(*La France Médicale*, 16th December, 1892.)

The Present Doctrine of Addison's Disease.—In a recently published account of this condition, W. Fleiner remarks that the complete clinical picture includes three groups of phenomena—viz., digestive, nervous, and pigmentary disorders. Symptoms of the first class are to be explained by the fact that an inhibitory influence passes from, or by way of, the suprarenals to the intestine. Jacoby has shown by experiment that fibres, which exercise an inhibitory influence over the intestinal movements, pass from the capsules to the semilunar ganglia. The profuse diarrhœa, which, as a rule, is a late feature of the disease, corresponds probably to the time when the capsules have become involved to the fullest extent. The nervous symptoms are easily accounted for by the changes, which undoubtedly do occur in some cases, if they are not constant, in the sympathetic and splanchnic nerves. The author would likewise attribute the pigmentation to the involvement of nerves. He has found in two cases of Addison's disease, not only changes in the suprarenal capsules and semilunar ganglia, but also an ascending degeneration of medullated nerve fibres, which passed from the capsules to the ganglia, and thence through the splanchnic, sympathetic, and vagus. From the sympathetic, the degenerative and inflammatory process extended to the spinal ganglia, which showed well marked changes. The branches to the sympathetic and intercostal nerves, as well as those to the posterior roots of the spinal cord, were degenerated in a very striking manner. The author is of opinion that the pigmentation of the skin is due to trophic disturbances, which have their seat in the spinal ganglia.

With regard to the urinary secretion, Jacoby found that on irritation of the suprarenal capsules, there was an appreciable retardation of that process. Pathological conditions may, perhaps, likewise bring about a state resembling uræmia.

The author leaves unanswered the question whether it is possible to diagnose disease of the capsules during life (*i. e.*, in the absence of the characteristic pigmentation). A reviewer of Fleiner's work refers to a recent case published by Leichtenstern, which encourages us to answer in the affirmative.—(See *Deutsche Med.-Zeit.*, 4th August, 1892.)

Articular Metastases in Croupous Pneumonia.—Brunner records a case in which swelling and pain developed in the left wrist about two days after the onset of the pulmonary affection. An exploratory puncture of the joint-cavity showed that the effusion was purulent, and the joint was therefore excised. The patient, however, did not survive. At the autopsy, part of the left lung was found to be in a state of red to grey hepatisation, without any suppuration. The organisms obtained by cultivation from the fluid of the affected lung were principally staphylococcus aureus and albus, but there were also isolated colonies of pneumococcus. The pus from the wrist joint contained no staphylococci, but an abundance of the diplococcus pneumoniæ of Fränkel and Weichselbaum.

Reviewing the cases hitherto published, the author remarks that with regard to the time of onset of the articular inflammation, it has only once been recorded as preceding the pulmonary disease; in two cases, it began on the same day; while, in all the others, it set in, either in the course of, or after the pneumonia. In the majority of cases, the arthritis was limited to one joint, and this, as a rule, the shoulder. Death took place in 14 out of the 22 recorded cases. The earlier the appearance of the joint disease, the less favourable the prognosis. Six cases were complicated by recent endocarditis. Pure cultivations showed, in eleven cases, that there was present in the articular effusion, the organism which Fränkel and others have described as the exciting cause of croupous pneumonia. The connection, therefore, between the pneumonia and the arthritis can no longer be looked upon as accidental. Indeed, recent researches have shown that numerous other acute inflammations may be attributable to the same organism. Thus it has been found in a case of suppurative periostitis after pneumonia; in cases of simple fracture where suppuration has taken place owing to an invasion by pneumococci from an intercurrent pneumonia; in abscesses of the skin, suppurative parotitis, &c.

An arthritis of the kind that has just been considered seems to cause destruction of the articular surfaces less frequently, or to a less degree, than the more common forms of suppuration are apt to do.—(*Deut. Med.-Zeitung*, 1st September, 1892.)

PATHOLOGY AND BACTERIOLOGY.

By R. M. BUCHANAN, M.B., C.M.

Observations on Leucocythæmia. Muir (*Journal of Pathology and Bacteriology*, October, 1892).—The author gives an account of the histological changes in the blood in leucocythæmia, and discusses shortly some of the opinions held with regard to their interpretation. Improved methods have led to new observations "sufficient to induce the hope that ere long the nature of the disease will be definitely ascertained, though its cause may remain unknown for some time longer." The explanation of the changes in the blood will largely depend on a better understanding of the origin of white and red blood corpuscles and their relation to one another.

The blood was examined, in its fresh, unaltered condition, in various preserving fluids, and in permanent preparations. For the latter "Ehrlich's method of making films of blood on cover-glasses, which are dried and afterwards fixed by heating for some time at a temperature of 120° C., or by passing several times quickly through a Bunsen flame, is of great service, on account of its rapidity and the ease with which staining reagents can afterwards be used." The author has also devised a method (*Jour. of Anat. and Phys.*, 1891, p. 258, and 1892, p. 393) of fixing the films before any drying occurs, by dropping the cover-glasses with the films downwards into a saturated solution of corrosive sublimate, the films being afterwards treated by the various staining processes; and also a method of dropping a small quantity of the fresh blood into Flemming's strong solution, which fixes and hardens it at the same time, so that the drops can be embedded in paraffin and sections made. The most suitable stains were found to be safranin or

Ehrlich's acid hæmatoxylin, along with the usual contrast stains. These two methods (by which the cells of the bone marrow can also be treated) are of special service in studying the nuclei of the cells in relation to the question of their multiplication by division.

The blood was examined in seven cases of leucocythæmia, and the chief facts in these cases, as well as the average number of corpuscles, are given, and may be tabulated as under for the sake of comparison :—

Case.		Red Corpuscles.	White Corpuscles.	Collateral Facts.
1.	M. R., 35, F.	3,000,000	160,000	Enormous enlargement of spleen ; lymphatic glands not enlarged.
2.	D. K., 23, M.	3,750,000	750,000	Spleen greatly enlarged; lymphatic glands not enlarged.
3.	C. M'L., 33, F.	2,800,000	250,000	Enormous enlargement of spleen ; lymphatic glands not enlarged.
4.	G. R., 10, M.	721,250 (before death).	283,000	Great enlargement of spleen ; general enlargement of lymphatic glands ; also general leucocytic infiltration of the tissues and great enlargement of kidneys.
5.	A. H., 22, F.	947,500	687,500	Enormous enlargement of spleen ; no enlargement of lymphatic glands, but tumour-like mass in mediastinum.
6.	A. G., 32, M.	1,800,000	160,000	Moderate enlargement of spleen ; no enlargement of lymphatic glands.
7.	T. M'G., 3, M.	1,890,000	196,000	Considerable enlargement of spleen ; lymphatic glands just palpable.

The first three cases form a class in which the blood was characterised by the presence of a great variety of colourless cells, the spleen enormously enlarged, and the lymphatic glands unaffected—the type of leucocythæmia formerly called *splenic*, but now generally designated by recent German writers as *spleno-medullary*. The other four cases likewise form a class by themselves, from the fact that the colourless cells were nearly all of the small uninucleated variety. "When this character of the blood is associated with enlargements of the lymphatic glands, the term '*lymphatic*' leucocythæmia is often applied, but we may have the same changes in the blood without any enlargement of the lymphatic glands."

In the first class or type of cases the characters presented by the blood are described in detail, and the description agrees closely with that given by the leading authorities.

(1) The eosinophile cells (*i. e.*, cells numbering about 2 to 4 per cent of the leucocytes in normal blood, mostly with a single round or oval nucleus, and containing coarse granules which stain deeply with acid aniline stains, *e. g.*, eosin, aurantia, &c.), are generally increased in number. Eosinophile cells may be seen undergoing mitotic changes in the bone marrow (in which they cottage, and so also did a male lodger, who had been with the old couple some

also exist normally), but not in the blood or in the spleen. Increase in the number of these cells is not peculiar to leucocythæmia (spleno-medullary), but in leucocythæmia they are much larger than those normally present. If a film of leucocythæmic blood be compared with a film of bone marrow fixed and stained in the same way, the similarity in the characters of the eosinophile cells in the two specimens is very striking.

(2) The presence in large numbers of *large uninucleated corpuscles* which contain no eosinophile granules is also a striking feature. The protoplasm of these cells stains more deeply, and the nucleus less deeply as compared with the ordinary multinucleated leucocytes. They also differ from the latter in showing no amœboid movement. These corpuscles have not only a great similarity to the so-called "marrow-cells," but so resemble them in all the above mentioned particulars that they are believed by the author to be identical. A very distinctive feature of these cells also is that the protoplasm, like that of the marrow-cells, contains *neutrophile* granules (the neutrophile granules are revealed by staining with a mixture of an acid and an alkaline stain), and Ehrlich has come to the conclusion that in leucocythæmia alone are such cells to be found.

(3) The *ordinary multinucleated leucocytes* of the blood are also increased, whilst the small uninucleated forms, or lymphocytes, show no increase.

(4) Many corpuscles with "mast-cell" granules (which stain with basic aniline stains, and which are similar to the granules found in the variety of connective tissue corpuscles known as mast-cells) may be present.

(5) The *nucleated red corpuscle* is another element abnormally present in the blood in this type of the disease. It is normally present in the marrow, and only occurs in the blood of the adult in a variety of anæmic conditions.

In the second class or type of cases "the essential change may be described as an enormous increase in the number of the uninucleated leucocytes, such as are normally present in the blood. . . . There was little or no increase of multinucleated leucocytes; in fact, in some cases these appeared to be absolutely as well as relatively diminished in number. Eosinophile cells were exceedingly scanty, many fields of the microscope often being searched without a single example being seen. Nucleated red corpuscles were generally absent. . . . The large uninucleated corpuscles (marrow-cells) were also generally absent. . . . Cells with 'mast-cell granules' are never numerous in this form of leucocythæmia, and generally appear to be altogether absent."

The differences in the characters of the blood in these two types of leucocythæmia are rendered very distinct by the use of the Ehrlich-Biondi stain of methyl-green, orange, and acid fuchsin.

The presence of the abnormal elements in the blood in the first type (spleno-medullary) is ascribed to a pathological condition of the bone marrow. There is evident an excessive proliferation of eosinophile and neutrophile corpuscles in the marrow causing their appearance in the blood, and also giving rise to the excessive number of ordinary multinucleated leucocytes. "The appearance of the nucleated red corpuscles in the blood might be explained either by an increased proliferation on their part, or by their being simply carried into the blood-stream owing to the disturbance of the normal cellular arrangements in the marrow by proliferating marrow-cells. . . . In the normal marrow the nucleated red corpuscles may be seen lying chiefly at the periphery of the vascular channels, and it is evident that any structural change in the marrow would readily cause them to enter the blood-stream in their immature condition."

The starting point of the second type is more difficult to determine. "We cannot judge of this from the character of the cells, as those small uninucleated leucocytes are normally present in the blood, in the blood-glands, and, in fact, practically all through the body; and, accordingly, our only guide, and that an imperfect one, is from the organ which first shows enlargement. While it is true that the lymphatic glands are very often enlarged, and may probably in some cases be the starting-point of the disease, their enlargement is by no means invariable. In two of the above cases there was no enlargement of the lymphatic glands; in one of these the enlargement of the spleen was not considerable; whilst in another the lymphatic glands were just palpable in some situations. . . . If, therefore, the term 'lymphatic' is employed, it ought only to be as indicating the character of the cells increased in the blood, &c., and not as implying that the disease has necessarily started in the lymphatic glands, or even that these are affected." The small uninucleated leucocytes of this form show mitotic changes in the spleen and lymphatic glands, and "it is apparent that if a proliferation of these cells starts in any gland or organ, and the cells, capable of further proliferation, pass into the blood, any organ in the body may be secondarily affected." The marrow appears in this class of cases also to be profoundly altered, perhaps more so than in the other, there being almost an absence of nucleated red corpuscles, marrow-cells, &c., their place being taken by the small uninucleated leucocytes. The author ascribes his experience of a more rapidly advancing anæmia, and more quickly fatal termination in the "lymphatic" than in the "spleno-medullary" form, to this absence from the marrow of nucleated red corpuscles, and of the cells which are believed to be their antecedents.

"An important question is whether the various kinds of cells in excess in the blood can be explained by the proliferation of one kind of cell—namely, the marrow-cell. If the eosinophile cells in the marrow are merely a variety of the ordinary marrow-cell, and not a distinct element, and if the marrow-cells also produce multinucleated leucocytes, such an explanation is probably the true one. . . . Biondi considers that the various forms of colourless cells in the blood in leucocythæmia are not distinct entities, but derivatives of the same class of cell. There is, therefore, strong evidence for believing that the changes found in both forms of leucocythæmia are due to the indefinite proliferation of a certain kind of cell, in a manner analogous to what we find in the growth of certain tumours—*e. g.*, sarcomata."

Regarding the condition leucocytosis occurring in suppurative conditions, acute fevers, &c., Dr. Muir has found that there is simply an increase of the leucocytes normally present in the blood, an increase almost exclusively on the part of the multinucleated forms. "It is accordingly quite incorrect and unscientific to separate leucocythæmia from leucocytosis by the mere number of the leucocytes, for apart from the real nature of the two conditions, the difference, so far as the colourless cells in the blood are concerned, is one also of quality and not of quantities only."

Contributions to the Knowledge of Sputum, particularly Asthmatic Sputum, and to the Pathology of Bronchial Asthma. Ad. Schmidt (*Zeitschrift für klinische Medicin*, vol. xx, parts iv to vi).—"The examination of sputum by making sections from balls of sputum hardened in sublimate and salt solutions in alcohol was described by Schmidt in the *Centralblatt für klinische Medicin* (No. 25, 1891), and he has here given some of the results of the application of that method.

"The questions chiefly dealt with are the nature, mode of origin, and significance of Curschmann's spirals in asthmatic sputum, though incidentally other sputa and other sputum ingredients are described. For demonstration of the spirals he finds Weigert's fibrin stain best. In sputum sections, stained as above, he describes sharply defined and deeply stained, corkscrew like structures, homogeneous in character, of very varying length and thickness, which he designates as 'typical twisted forms,' and which he regards as the central filaments of Curschmann spirals. In addition, irregular, deeply stained mucin masses, and transitional forms between them and the typical form occur.

"As to the nature of the spirals—the mucous character of the envelope is generally admitted, but these central filaments are variously regarded as mucus, fibrin, hyaline substance, &c. Though the author has satisfied himself, by various methods of staining, that they consist of mucus only, though of a different consistence to that of their less deeply staining envelope, he is unable to support Curschmann's view that the spirals are significant of a special form of disease ('bronchiolitis exudativa'). The author has found these in the sputa of asthma (8 cases), in pneumonia (4 out of 7 cases), in bronchitis without history of asthma (4 out of 9 cases); but they have not been discovered in the cavity sputa of phthisis. 'Exudative bronchiolitis' occurs, therefore, in various diseases of the respiratory tract, and catarrhal inflammation of the bronchioles may, undoubtedly, occur without the formation of spirals. We may, however, he thinks, regard their presence as evidence of an exudative inflammatory process in the finer bronchioles, without regarding that process as of a special character.

"As to the mode of formation of the spirals, Schmidt disagrees with the views of Levy, Curschmann, and Pel.

"Microscopic examination of sections obtained from the lungs of a patient who died in a typical asthmatic paroxysm showed that though the alveoli were filled with mucus, neither in them nor in the ducts of the mucous glands was any twisting observable. Further, that proceeding from the larger bronchi towards the periphery the spirals became less and less obvious until in the smallest bronchioles the twisting of their contents, recognisable here and there, presented nothing characteristic. Nowhere, however, even where the spiral and its central filament could be distinctly recognised, was the whole of the contents of a bronchiole twisted. The twisting always occupied only a part of the lumen, and Schmidt infers from the appearances that most probably the whirling movements of the air during long lasting paroxysms of dyspnœa or violent fits of coughing in the disease in which they are found, acting upon a viscous and adherent mucous mass, determine the formation of the spirals.

"As to the occurrence of fibrin in sputa, the author has been able to demonstrate its presence in 6 out of 8 cases of asthma. In one of these cases the abundance of fibrin deposits was so great that the sputa resembled that of a case of bronchitis fibrinosa, though clinically it was typically asthmatic, and as spirals have been repeatedly found in cases of fibrinous bronchitis it is not always easy to classify such cases. He has also found coagulations of fibrin in the sputa of 1 of 2 cases of capillary bronchitis, though both were clinically cases of ordinary bronchitis, but in 5 cases of phthisis the cavity sputa had no fibrin deposits.

"Concerning eosinophile cells and Charcot Leyden crystals in sputa, the author also finds that their discovery does not warrant the inference of the existence of a particular form of disease, and he concludes that in the diagnosis of bronchial asthma the examination of the sputum has not that value that has sometimes recently been attributed to it."—(*Medical Chronicle*, November, 1892.)

Effects of Tetanic Toxines.—At the Société de Biologie a paper was read by MM. Courmont and Doyon giving the results of some experiments on this subject. They confirmed the results published by Vaillard and Vincent as to the commencement of tetanic symptoms in the muscle. The fluid used in these experiments was a filtered culture of the bacillus of Nicolaier. With small animals and a small dose, the first signs were manifested in the muscle inoculated or in the neighbouring ones, but not invariably. In men and the larger animals the tetanic spasms frequently commence in other muscles often at some distance from the point of inoculation.

The authors thought that the sensory nerves of the muscles might be concerned in this matter, so they experimented on a superficial muscle. This muscle had two sources of motor and of sensory nerve supply which entered the muscle separately. They cut the sensory nerves of the sterno-maxillary muscle of the ass, and inoculated the muscle with 1 cc. of the solution. No result. An injection of 3 cc., however, produced violent general symptoms. Two experiments were made on the horse, and 2 cc. of solution were injected into the similarly enervated muscle; the tetanic spasms began in the ears, then the head, and later the limbs, though the muscle experimented on was unaffected till death occurred. This shows that no fixed rule can be laid down for all kinds of animals, for in this case the tetanus occurred in muscles far from the lesion, as is the case in man.—(*Médicine Moderne.*)—A. N. M'G.

The Etiology of Cancer.—Law Webb (*Birmingham Medical Review*, December, 1892.)—In this interesting paper the author's observations relate chiefly to the question of the part played by heredity in the etiology of cancer. He is not satisfied that cancer is hereditary, even in the moderate number of instances in which it seems to be so, and in which there is a clear history of a succession of cases in the family. After making all possible enquiry, it was found that the fifty-five cases of cancer, met with in a practice extending over twenty years, furnished only four instances in which there was a history of the disease previously occurring in the family. On the other hand, attention is drawn to another aspect of the question—namely, infection of one individual from another, or of a number of individuals from a common source.

A series of cases are quoted which suggest to Mr. Webb that there are not only "cancer-fields" and "cancer-areas," but "cancer-houses," and cancerous wells or water supplies. It is assumed as a "working hypothesis" for the time being, that cancer is caused by a specific irritant acting upon the tissue-elements altered by age or chronic inflammation, or both these, and also that the various forms of cancer (scirrhus, rodent ulcer, and epithelioma) may proceed from one and the same specific irritant.

The following account of the cases is given:—

"In a village not 2 miles from my residence are two houses under one roof, with a drain system and water supply common to both. I will call these dwellings No. 1 and No. 2. Twenty-six years ago, a man aged 28, living at No. 1, suffered from cancer of the rectum, of which he died. The diagnosis was confirmed by examination *post-mortem*. The house was next occupied by Mr. J. M. and his wife. This gentleman, aged about 60, two years after the death of the previous tenant, was treated for cancer of the stomach, of which malady he died, after a three months' illness with constant vomiting. His widow continued to live in the same house, and died ten years later, aged 65, from cancer of the rectum. A mass of tumour substance protruded externally before she died. She was ill about six months.

"Before her death, however, Mrs. R., aged 50, who resided next door at No. 2, was found to be suffering from cancer of the breast, which proved fatal in eight months.

"After the death of Mr. J. M.'s widow, No. 1 was occupied by three maiden ladies. Of these, Miss P. died four years ago, from cancer uteri, at the age of 58. She was assiduously nursed by Miss F., who also died last winter with all the symptoms of cancer of the stomach. Her age was 61. The other lady still survives in fairly good health.

"None of these people were blood-relations, nor can I discover that any of them had a family history of cancer. This is therefore a remarkable sequence of carcinoma cases; and, in my limited research into the literature of the subject, I have met with nothing like it.

"In a group of cottages much nearer to my house, nine cases of cancer have been treated in the past fifteen years. These dwellings are grouped together, and do not occupy much more than an acre of ground. All the inhabitants use water from a certain pump situate by the road side, and close to a very filthy hovel. There are twenty houses in all; one cottage, enjoying a bad pre-eminence for dirt and discomfort, furnished three cases of cancer out of the nine mentioned above. In order to enter this hovel one has to stride across a small cesspool in front of the door step. Here, eight years ago, lived an old man with epithelioma of the lower lip. I removed the growth, and was disappointed to find that no sooner was the operation wound healed than difficulty in swallowing was noticed, and in about four months he died of malignant stricture of the gullet. His widow continued to live in the same years. This old fellow, a hardy, healthy-looking old man of sixty, working as a road maker, came to me two years ago for the removal of an epithelioma of the lower lip. This I excised, and he remains well, so far with no recurrence of the growth.

"The widow, however, last year consulted me about a sore in the skin of her back, over the sacrum, which troubled her greatly. It spread slowly, and would not heal. Though it looked more like a patch of lupus than anything else, I strongly advised excision. This was eventually done in a thoroughly effectual manner by Mr. Barling, and up to the present there has been no recurrence. Microscopic examination of the growth leaves no doubt as to its nature, as it has the usual structure of epithelioma. It will be noted that these three persons were not relations. Nor were any of the remaining six cases akin. In no one of the nine was there a family history of malignant disease.

"I will quote but two more instances of what I have called 'cancer-houses.' In one, a domestic servant suffered from cancer of the breast. Many years after, a gentleman who had long lived in the same house died of cancer of the bladder. In the other, an elderly man died eighteen years ago from cancer of the rectum. He was at one time under the care of Mr. Furneaux Jordan, who confirmed the diagnosis already made of malignant disease. Eight years ago his wife also died of cancer of the rectum. She had continued to reside in the same house."

DISEASES OF THE EAR.

By Dr. WALKER DOWNIE.

Compressed Air and Sprays in the Treatment of Diseases of the Ear. By Seth S. Bishop, M.D., Chicago.—Although compressed air is used largely in the treatment of diseases of the ear, little consideration is given to dosage—*i. e.*, the quantity and pressure employed. Politzer certainly mentions that the maximum amount of pressure obtainable from one of his 8 oz. bags is 6 lb., and by the use of a 6 oz. bag a pressure of from 10 to 12 lb. is possible, the smaller bag being more readily grasped, and so more forcibly compressed than the larger size. To get a higher degree of pressure, Bishop recommends the use of Messrs. Traux & Co.'s compressed air apparatus, furnished with a meter to gauge the force used. He has found it necessary frequently to use from 60 to 90 lb. pressure in order to open up the Eustachian tube and inflate the tympanum in old standing middle-ear affections, and this he has done without causing any injury to the thickened membrana tympani. Politzer showed that in the case of a normal membrana tympani a pressure of 45 to 60 lb. is necessary to cause rupture. When high pressure is employed only a small volume should be used, the rule given, in short, by Bishop being, "The higher the pressure the lower the volume should be;" and when using very high pressures during the first impulse, he advises the leaving of the nostril, opposite to that into which the nozzle of the inflator is introduced, open, through which the surplus air may escape. When applied through a Eustachian catheter pressure must be increased very gradually, but one of the advantages claimed by using this apparatus is that almost all cases requiring inflation can be successfully treated without the use of the catheter. In practicing inflation by the help of this apparatus, Dr. Bishop directs his patient to close the lips and inflate the cheeks, though some cases are more readily inflated during the act of swallowing; and he considers that this apparatus makes the middle ears nearly as accessible as the nose and throat for treatment with the various volatile and soluble remedies.

A discussion followed this paper, which was read before the Section of Laryngology and Otology of the American Medical Association, and the opinion expressed by almost every speaker was of a sceptical character. When considering the amount of pressure said to be employed, Dr. Hubbard stated that the pressure of 60 to 90 lb. given by Dr. Bishop for an adult should be divided by 10 or even by 20, the pressure employed by this gentleman being from 1 to 2½ lb. The majority were agreed that if anything like a pressure of 40 lb., or over, were employed it would, besides damaging the tympanic membrane, seriously injure the nasal and pharyngeal mucous membranes.

Dr. Bishop, in replying, agreed that the high pressures of which he had spoken were dangerous as formerly applied, but by the addition of his meter, both pressure and volume were entirely under control; and he was prepared to demonstrate the possibility of breaking up adhesions and anchylosis, overcoming immobility of the ossicles, and restoring a shrunken drum membrane to its normal position in many instances.—(*Journal of the American Medical Association*, 22nd October, 1892.)

Spastic Contraction of Tensor Tympani Muscle. By Dr. C. W. Richardson, M.D., Washington.—When symptoms first appeared, the patient was a lad of 14. The earlier symptom consisted of an intermittent roar in both ears, but after the lapse of several months it assumed a ticking character, and this ticking was not only subjective, but was distinctly audible to any one coming into close contact with the patient's head. The ticking was so loud, and so closely resembled that of a watch, that when first observed by his guardian, which occurred while at prayers in church, when the boy's head was resting against her own, she enquired of him where he had obtained the watch. The clicking in each ear was entirely independent of the other; they seldom or never pulsated synchronously. He lost sleep, he was unable to read, or to concentrate his attention on any subject for any length of time, his health suffered, and he became dull intellectually. The tympanic membranes, though of normal colour, were dull and indrawn, and the manubrium, during inflation and the use of Siegle's otoscope, remained motionless, although the membranes moved readily. Hearing appeared normal. After being under observation for six months, the patient passed from under Dr. Richardson's observation. Later, he came under the care of another doctor, when he was found to be suffering from pachymeningitis, from which he died at the age of 18. The clicking in this case was undoubtedly due to contraction of the tensor tympani muscle, for the sound produced was clear and sharp, entirely different from that heard during the involuntary contraction of the constrictor or palate muscles, and, on examining the pharynx, there was no movement of those latter muscles visible.—(*Journal of the American Medical Association*, 22nd October, 1892.)

A Case of Simulated Deafness. By Dr. Thomas Barr, Glasgow.—The patient, who was a servant girl, 16 years of age, stated that while recovering from a cold she became deaf, and within four days declared she was totally deaf on both sides. So deaf was she said to have become that she could not hear the report of a pistol fired close to her ear. At first she complained of ringing in the ears, but no giddiness at any time. She was communicated with at first by writing, but within a remarkably short time she claimed to have learned lip-reading, and she gave no heed to any remark unless she was looking at the speaker's face. However, it was seen that so long as the words were spoken audibly she readily understood, but when tested by the speaker producing the labial movements associated with the formation of words, but without emitting any sound, she understood but imperfectly. She was treated with hypodermic injections of pilocarpin, the use of which caused her to salivate and to perspire freely. After five weeks' residence in hospital she one day began to sing a song which an attendant in the house had been singing, and when her attention was called to this fact, she said she acquired the air by lip-reading. She was told this was impossible, and within a short time she said her hearing was returning, and within three days thereafter it was perfect.—(*Archives of Otology*, October, 1892.)

Case of Chronic Suppuration of the Middle Ear—Petrous Necrosis—Meningitis—Death. By J. W. Barret, M.D.—This case illustrates the consequences of neglect to treat an acute abscess of the middle ear, which is perhaps founded on the traditional belief that a discharge from the ear is rather of advantage than dangerous. The patient was 24 years of age, and from childhood he had suffered from an offensive discharge from left ear. Eight weeks before seeking advice he had been suddenly seized with earache, pain at back of head, and vomiting. At the end of two weeks this passed away on the reappearance of discharge. When first seen, pain was specially in nape of neck and along the tract of the jugular vein. On examination, the left membrana tympani was found to be absent, the tympanic cavity lined with unhealthy granulations secreting small quantities of foul pus. Under treatment urgent symptoms disappeared, but suddenly reappeared with high temperature, and mastoid was freely opened, by which the symptoms were again relieved. Five days later the patient died, and a *post-mortem* examination was made. The left auditory nerve was congested and softened up to its root; the membranes of the brain near origin of nerve were infiltrated with purulent matter. The left petrous bone was converted into a shell filled with foul-smelling caseous matter, occupying the site of the internal ear, of which no definite trace remained. The mastoid process showed no trace of disease, and the lateral sinus was normal. Such cases are not so very rare, and the simple fact of their occurrence at all should direct special attention to the treatment of all suppurative aural affections in their earlier and curable stages.—*Australian Medical Journal*, September, 1892.)

Books, Pamphlets, &c., Received.

On an Epidemic Skin Disease, by Thos. D. Saville, M.D. London: H. K. Lewis. 1892.

Aberdeen Doctors at Home and Abroad, by Ella Hill Burton Rodger. Edinburgh and London: Wm. Blackwood & Sons. 1893.

Clinical Diagnosis, by Rudolf v. Jaksch; translated and enlarged by Jas. Cagney, M.A., M.D. With numerous Illustrations, partly in Colours. London: Charles Griffin & Co. 1893.

Transactions of the Royal Academy of Medicine in Ireland, edited by Wm. Thomson, M.A., F.R.C.S. Vol. X. Dublin: Fannin & Co. 1892.

On Sledge and Horseback to Outcast Siberian Lepers, Illustrated from Photographs and Drawings, by Kate Marsden. London: The Record Press.

How to give Gas, by T. E. Constant, M.R.C.S. Illustrated. London: J. P. Segg & Co.

Transactions of the American Surgical Association, edited by G. J. Ewing Mears. Vol. X. Philadelphia: William J. Dornan. 1892.

Symptoms and Physical Signs, by Wm. Ewart, M.D. London: Baillière, Tindall & Cox. 1892.

The Hygiene of the Ear, by Dr. Vincenzo Cozzolino; translated from the fifth Italian edition by James Erskine, M.A., M.B. London: Baillière, Tindall & Cox. 1892.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. XIII. Washington: Government Printing Office. 1892.

The More Severe Forms of Lateral Curvature of the Spine, by Noble Smith, F.R.C.S.Ed. With 23 Figures. London: Smith, Elder & Co. 1892.

A Manual of Practice of Medicine, prepared specially for Students, by A. A. Stevens, A.M., M.D. Illustrated. Philadelphia: W. B. Saunders. 1893.

A Manual of Medical Jurisprudence and Toxicology, by Henry C. Chapman, M.D. With 36 Illustrations. Philadelphia: W. B. Saunders. 1892.

Notes on the Newer Remedies, by David Cerna, M.D., Ph.D. Philadelphia: W. B. Saunders. 1893.

The Middlesex Hospital Reports of the Medical, Surgical, and Pathological Registrars for the Year 1891. London: H. K. Lewis. 1892.

Syphilis and the Nervous System, by W. R. Gowers, M.D. London: J. & A. Churchill. 1892.

Elementary Physiology for Students, by Alfred T. Schofield, M.D. London: Cassell & Co. 1892.

The Year-Book of Treatment for 1893. London: Cassell & Co.

Annals of Surgery, edited by Frederick Treves, F.R.C.S.; L. S. Pilcher, A.M., M.D.; Wm. Macewen, M.D.; and J. William White, M.D. New and enlarged series. London: Cassell & Co.

Quain's Elements of Anatomy, edited by E. A. Schäfer, F.R.S., and Geo. Dancer Thane. In 3 Vols. Vol. III, Part I: Spinal Cord and Brain, by Professor Schäfer. With 139 Engravings. Tenth edition. London: Longmans, Green & Co. 1893.

The Health Officer's Pocket-Book, by Edward F. Willoughby, M.D. London: Crosby, Lockwood & Son. 1893.

The Food Inspector's Handbook, by Francis Vacher. London: The Record Press.

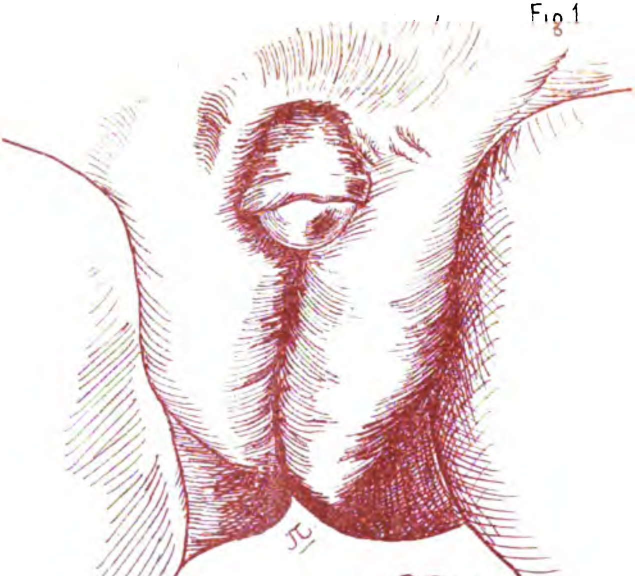
Hygiene and Public Health, by B. Arthur Whitelegge, M.D., B.Sc., D.P.H. With 23 Illustrations. Second edition. London: Cassell & Co. 1893.

A Dissertation on Osteo-Arthritis, by W. H. Russell Forsbrook, M.D., M.R.C.S. London: H. K. Lewis. 1893.

Various Forms of Hysterical or Functional Paralysis, by H. Charlton Bastian, M.A., M.D., F.R.S. London: H. K. Lewis. 1893.

An Introduction to the Study of Diseases of the Skin, by P. H. Pye-Smith, M.D., F.R.S. London: J. & A. Churchill. 1893.

Fig 1



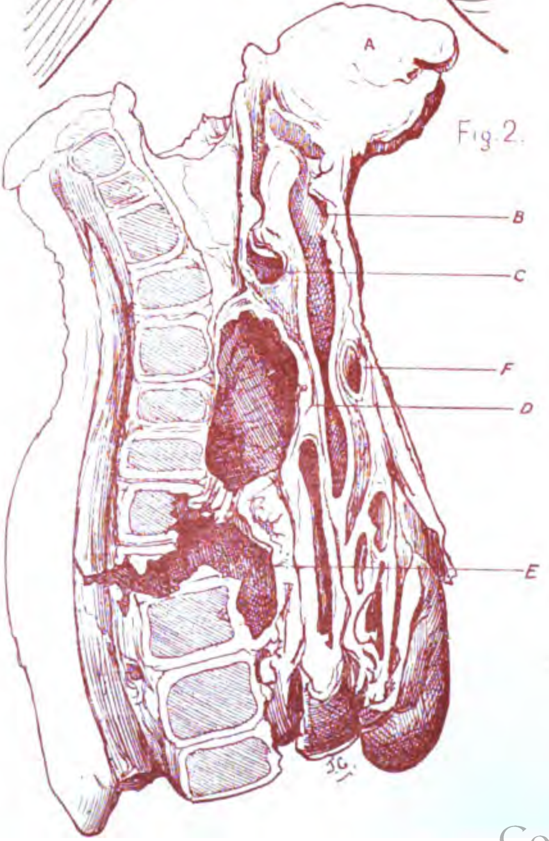


Fig. 2.

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ORIGINAL ARTICLES.

THREE CASES OF DOUBTFUL SEX IN ONE FAMILY.*

By JOHN LINDSAY, M.A., M.B.

(*With a Lithographic Illustration.*)

Gentlemen,—I have the honour to bring before you a little group of cases which, though not unique even as a group, are in some respects of sufficient rarity and interest to deserve your notice. They have not before been reported upon; for, except one of them, before the others were born, they have not hitherto been seen by a medical man. The parents are quite aware of the defect in their children, but are so sensitive in regard to it that they have concealed it from notice with the greatest possible care; and it was only by accident that I discovered it when attending the family during a recent attack of measles.

The eldest, as has been mentioned, was seen by a doctor at his birth; and seemingly on his advice was reared as a boy. The other two, who followed the first in immediate succession, were not so seen; but the parents of their own notion, and in accordance with the opinion of a midwife, have brought them up as girls. All of them are essentially alike, and the description which I draw from the youngest, one of the so-called girls, and whom I will show you, applies to all of them with slight variation.

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* Read before the Obstetrical and Gynæcological Society, 25th January, 1893.

Robert D. is just over 7 years of age, Jessie is 6, and Lizzie nearly 5. When the child is lying at rest with the thighs approximated, the external genital organs present the appearance of those of a young female, but with the clitoris much enlarged, as shown in the accompanying sketch taken from Lizzie. Two folds of integument embrace the root of the clitoris or penis, and simulate the labia majora. These have not, however, the firm consistence usual in the labia, but give to the fingers the impression of sacs containing strands of some loose tissue. When drawn aside they are found to be united in a median raphê depressed to the line of the perinæum, and showing only an indication of duplicature at its posterior end. At its anterior extremity, and at the root of the diminutive penis, there is a minute opening, so minute as to be distinguishable only by the more delicate character of the surrounding skin, and by its rosy or purplish colour. It communicates with the bladder, and the narrowness of it gives rise to difficulty in micturition, and a consequent prolapse of the rectum. In the two older children, however, the opening is more patent.

The penis is slightly over an inch in length and about three-quarters of an inch across the corona glandis. It is imperforate; and along its lower surface there is a depression, bridged for part of its length in one instance by a kind of cribriform membrane. In the same situation in the eldest child there is a narrow ridge of skin which draws the penis into an arch with the concavity downwards, when the organ becomes turgid, as it sometimes does on palpation. Except this there is no indication of the nymphæ. On the glans there is a distinct dimple in the situation of the meatus. The glans itself is constantly exposed, but there is a well marked prepuce with a copious secretion under it. There are no testicles in the divided scrotum, nor are they to be found in the inguinal canals in any of the children, though in the youngest there is a small roundish body in or near the canal on either side. These are too small for normal testicles, and are probably enlarged glands or little masses of fat, such as you sometimes find in children whose testicles are properly placed.

Owing to the relaxed condition of the anus and rectum in Lizzie, I was able to make a fairly complete examination of the interior of the pelvis. I could find no uterus or vagina; neither could I distinguish the prostate gland.

The parents say that they themselves are properly formed; but the husband wears a truss for double inguinal hernia, which appeared shortly before his marriage. Neither he nor his wife know of any malformation among their relatives. Previous to the birth of the first of these three they lost two children by scarlet fever, and the mother suffered a miscarriage. She was much distressed in mind at this time, and she attaches importance to this point. She says, too, that after the birth of Robert and Jessie respectively she brooded much on their defects. The five first children of the marriage were naturally formed, and the one following Lizzie was a well formed male.

Founding on the impression given to the fingers by the apparent labia, and attaching some weight to the negative character of the rectal examination, but more especially on the ground of the relatively much greater frequency of this form of malformation, these children are to be regarded as hypospadic males. That a diagnosis of so much consequence should rest on a basis so unsatisfactory is much to be regretted, but to take it as established with greater certainty would be to delude oneself. The instances in which the *post-mortem* dissection of such cases has falsified the *ante-mortem* diagnosis are numerous enough and striking enough to make one doubt whether during life an opinion as to the sex can be given with any assurance at all. To found an opinion on the external appearance alone would be in the highest degree unscientific. In females malformed by enlargement of the clitoris there is not infrequently added to the characteristic abnormality others which give to the external parts as close an approximation to the male type as you find in these children. The labia may be united, and the skin of the perinæum extended forwards to the base of the clitoris, leaving only a minute opening there. The glans clitoridis may show a depression at the site of the meatus, or the organ may even be perforated by the urethra throughout its whole length. One such case is reported by Ramsbotham,* of whose sketch I show you a copy. The infant in question had been baptised as a boy, and it was only a *post-mortem* examination that showed it to be a female. In another case reported by Heppner †—one of the best ascertained instances of true hermaphroditism that has been recorded—the external parts were those of a hypospadic male, whilst internally the female organs predominated, though some of the male organs were also present. Even a rectal examination cannot be implicitly relied on. The vagina sometimes opens deeply into the urethra, and may, with the uterus, be so small as to escape detection during life; or may be absent altogether in one otherwise ascertained to be a female.

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* *Medical Gazette*, vol. xiii, p. 184.

† *Archiv. für Anat. und Physiol.*, 1870.

Such considerations as these, and indeed the whole story of sexual malformations, make one venture on a diagnosis with much diffidence. Nor can one look forward to the period of puberty with the assurance that all doubt will then be set at rest. The descent of the testicles at that time would be almost conclusive. But there would be the difficulty of being sure that the descending bodies were really what they seemed to be, a difficulty that might be great enough were these, as they often are, atrophied or otherwise abnormal. Then the testicles might not descend at all, and in any case regard to the general habit of the body would probably add to rather than diminish the confusion. These individuals, in respect to the secondary sexual characters, are frequently of an indifferent cast, or show a mingling of the characters proper to the sexes separately. At puberty, as in infancy, the classification of those who are sexually abnormal turns on the estimation of probabilities.

The most noteworthy fact that we have here before us is the repeated occurrence of the same defect. Single cases of hypospadias are not very uncommon, but of two or more hypospadic brothers there have only been some half dozen instances in the last century and a half. That three children, showing the same deviation from nature, should be born of the same parents, points to some cause acting through a prolonged period, or to a remarkable coincidence of causes. What that cause or these causes may be we have here no hint, unless the suggestion of maternal impressions be so regarded.

Of similar phenomena, I will refer only to two. Simpson, in his article on "Hermaphroditism" in *Todd's Cyclopædia*, quotes a case of four hypospadic brothers. But this he does in error, as a reference to the original report* will show. Four lads who had been born at the same place in Siberia, within a few years of each other, were shown together to the Academy of Sciences at St. Petersburg in the year 1747 or 1748, and were described by Kaav Boerhaave. But these were two pairs of brothers from different families, and not four brothers from the same family, as Simpson seems to imply. Another of this author's references* is the only record I can find of more than two children of the same parents malformed in the genital organs. These were three hypospadic brothers described by Lepechin. The eldest was 30 years of age, and had been married for ten years, and was the father of four children. The second was 22, and had been married for five years, but had no children, on account of his wife's infirmity, it was said. The youngest was 20, and unmarried. All had large mammæ, treble voices, and no beards. Lepechin accounts for the power of procreation in the eldest by saying that when the penis was erect the aperture of the urethra also became tumid, and expanded itself along the sulcus on the inferior surface of the organ as far as the incisura of the glans, and the ejection occurred with the greater force as the opening was narrowed by the elongation.

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* *Nov. Comment. Acad. Scient. Petropolit.*, tom. i, tab. xi.

Postscript.—A few days ago I again examined the child Lizzie, this being about six weeks after my first notes were taken. Now I find two bodies in the inguinal canals, which I believe to be the testicles. The left is of the normal size, but is somewhat larger than the right. They were not there when I made my first repeated examinations, and are not the bodies referred to in my notes of that time. Yet the mother says that this child has always been fuller in the lower part of the belly than the other two. It may be that the testicles had then been temporarily withdrawn into the abdomen, she having been in bed for some days; whereas, lately, she has been going about again.

DESCRIPTION OF ILLUSTRATION (FIG. 1).

SKETCH OF THE PARTS AS SEEN IN THE CHILD "LIZZIE" (SEE TEXT).

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* *Nov. Comment. Acad. Scient. Petropolit.*, tom. xvi, 1771.

CLINICAL MEMORANDA,

BEING SELECTED CASES FROM THE WARDS OF

DR. M'CALL ANDERSON,
Professor of Clinical Medicine in the University of Glasgow.

(REPORTED BY WM. R. JACK, M.B.)

II.

3. *Syphilitic Affection of the Brain, &c.*

J. R., æt. 32, by trade a puddler, was admitted to the Western Infirmary, under the care of Professor M'Call Anderson, on the 2nd of February, 1892, with a history of "fits" of four months' duration.

The family history is unimportant. Four or five years ago he became subject to pain in the right hip, extending thence down the outer aspect of the thigh. He attributed it to exposure to extremes of temperature in the course of his work. It was medically treated, but without effect, and it gradually increased in severity. He has also suffered from an eruption known to puddlers as the "heat-rash," which he states is common among them. It consists of pimples occasionally appearing on the shins and shoulders.

With these exceptions he remained well till May, 1891, when he became affected with severe frontal headache. It occasionally ceased for a week or so, but always returned. About this time his friends noticed in him a strangeness of manner, and his memory became uncertain—*e.g.*, he once took the train to Ayr, and on his way forgot the name of his destination. The headache and "strangeness" became gradually more marked and more persistent. In the beginning of last October he was seized with a "fit" while walking in the street with his brother. Fourteen days afterwards he had a second seizure, while in his own house; and since then he has had several, varying in intensity and general character.

Shortly after the first seizure the sight of the left eye began to be dim, both for near and distant objects. When this commenced he "saw double" for a period of about ten days. The impairment of vision was accompanied by pain, and a feeling of heaviness in the eyeball. Two months afterwards his right eye became affected, and he states that he is now quite unable to read. He also complains of the badness of his memory.

The fits, as described by his friends, are of three types:—

I. *Major Seizure*—

a. Aura; peculiar sensation from tips of left fingers up to left eye. Numbness all over, and "strange appearance." Duration about ten minutes, after which—

b. Cry, as if of agony.

c. Mouth drawn upwards and to left. Right eye turned towards nose; left eye closed.

d. Loss of consciousness, before which he prepares himself against falling by lying or sitting down, and during which the whole body is convulsed, and the tongue occasionally bitten. In this stage he foams at the mouth, and becomes very livid, the lips being almost black. Duration five to seven minutes.

e. Stertorous breathing, gradually becoming lighter. Lividity passes off, and face becomes clay-coloured.

f. Peaceful sleep, from which he awakes feeling better than he has been for the few days before the fit.

II. *Medium Seizure*—

a. Aura as in major.

b. No cry.

c. Facial condition as in major.

d. Convulsive movement of right arm, but no loss of consciousness.

e. Becomes very white.

f. Recovers immediately afterwards.

Total duration, ten to fifteen minutes, after which he remarks that he has been unwell.

III. *Minor Seizure*—

During conversation he stutters over a couple of words or so, then becomes intensely pale, and ceases to speak. There is no loss of consciousness, and neither tonic nor clonic spasms occur. The seizure lasts only a few minutes, and is followed by great exhaustion.

Of these types the third is the most frequent, and after it the first, which, however, is becoming more rare. The second occurs but seldom.

The patient confirms, in so far as he is conscious of them, this account of his seizures.

Before entering the Western Infirmary he was under the care of Dr. M'Vail in the Royal Infirmary, to which he was admitted 20th October, 1891. The house-physician, Mr. Tod, states that he then complained, as now, of headache. He had had nine fits of an epileptic nature, and a tenth more cataleptic in character, a few days before admission. There was constant and severe pain in the left frontal region, and occasional pain over the occiput. Both these points were tender to percussion, but not to pressure. He had constant tinnitus aurium, and complained of giddiness. On rising suddenly his sight became dim. The motions of the eyeballs were normal, and the pupils equal, reacting to light. The left eye was painful. Dr. Wolff examined the eyes on 23rd October, and reported a left optic neuritis with retinal hæmorrhage. There was no paralysis. On the night of 27th October the patient had two semi-aphasic attacks, the first lasting half an hour, the second not quite so long. In neither did he lose consciousness, nor were there any other symptoms. He left on 30th October, refusing to continue the treatment adopted. The headache was gone, but he was otherwise *in statu quo.*

Examined on admission to the Western Infirmary, the patient is observed to have a somewhat dreamy expression. His replies to questions are slow and delayed, and suggest a lack of intelligence. His eyelids droop so much as almost to amount to ptosis, and he seems to be somewhat deaf. Physical examination is negative, save that there is some tenderness to percussion in the left temporal region. His bearing is very slovenly.

Dr. Thomas Reid reports on the eyes:—"In both eyes there is well marked papillitis, with well developed 'choked disc.' The optic nerve is prominent to the extent of one millimetre in the left eye, less so in the right. A considerable exudation covers the retinal vessels at their point of emergence, so that they seem to spring from near the margin of the disc. In the right eye the congestive condition predominates; whereas, in the left, the exudation has a whitish character, suggestive of absorptive change. The inflammatory condition is of a subacute character, showing some slow progress in affection, and probably depends on tumour or meningeal affection. . . . Hypermetropia to 3 D exists in both eyes."

Dr. Barr's report on the ears is as follows:—"Hearing by air-conduction, right ear $\frac{24}{40}$, left ear $\frac{26}{40}$. Left ear much more defective for speech and the tuning-fork than the right. Bone conduction comparatively defective. Very marked tinnitus in left ear, having the characters of steam blowing off. On middle line of head, tuning-fork heard only in right ear. Appearances of membranes fairly normal. Believes lesion to be mainly in nerve structures."

The diagnosis of intracranial syphilis was made, for the following reasons:—

(1) The age of the patient, 32, a time of life when syphilitic affections of the nervous system are common.

(2) Fourteen years ago he contracted a sore on the penis while serving in Zululand with his regiment. It was, he states, of small size, and discharged somewhat, but was not very painful. It was followed, about a year afterwards, by buboes in the right and left groin. That in the right groin was opened by the army surgeon; the other was never opened.

(3) The pain in the hip was markedly worse at night. The frontal headache was also worse at night, and still is so.

(4) Under the treatment in the Royal Infirmary (Pil. hydrarg. and increasing doses of iodide) the headache disappeared.

On 3rd February, 1892, he was put upon 30 grains potass. brom. at night, and 10 grains potass. iodid. in the morning. On the 8th mercurial inunction was commenced. On the 11th the bromide and iodide were stopped, and as the headaches continued, 15 grains antipyrin was ordered when necessary. On 2nd March inunction was stopped, as it had caused a pustular eruption. The headache still persisted, but had considerably improved since admission. There was slight photophobia. No fits occurred during the patient's stay, although he twice had premonitions. He left on 5th March, 1892.

He afterwards attended the Eye Infirmary for six weeks, but without improvement. During this time he never had a typical seizure, but on several occasions had minor attacks, consisting of the aura—a sensation of numbness extending from the fingers and toes up to the eyes—and temporary loss of speech. Since he left the Infirmary he has been unable to work, and the pains in the head have become increasingly severe. The eyesight also continues to fail. At the beginning of May he had a major seizure, the only one of the kind since he was last in hospital.

He was readmitted on 17th May, 1892, since when the headache has been extending to the right side, and remains equally severe on the left. Sometimes, he says, he substitutes one word for another, and he has considerable difficulty in articulation. The substitution of wrong words is especially noticeable immediately after waking. He always knows perfectly what he wishes to say. The sight remains in much the same condition. Tinnitus is constantly present in the left ear. The frontal pain occasionally shoots through to the occiput, but there is now no permanent occipital pain, though the hip pain, which is distinctly nocturnal in type, still persists to a less degree than formerly. He does not sleep well. He has had several minor seizures since admission.

On 10th June an aphasic attack took place, beginning at 8 A.M., and lasting till noon next day. Patient states that the fits are less numerous since mercury was commenced on 3rd June; but on the 9th there was one attack of numbness, beginning in the foot and fingers, and passing up to the eye on the right side. There was then no unconsciousness or aphasia. He is being treated by 30 grains of potass. brom. at night, and a daily hypodermic injection of one-eighth grain of hydrarg. perchlor.

Dr. Hinshelwood examined the eyes on 7th July, and reports that the discs are becoming much paler, especially the left. They have a filled-up appearance, and their edges are irregular and ill-defined. All the appearances are most marked in the left eye. Patient states that the headache and difficulty of speech are considerably diminished since readmission.

15th August.—Marked improvement in the headache and other symptoms, except the pain in the hip, which still persists. Yesterday a minor seizure occurred, lasting half an hour.

On the 14th and on the 20th August the patient had aphasic attacks, lasting an hour and twenty minutes respectively, with numbness passing from the toes and fingers up the right side of the face. The sight and the pain in the right hip are much as they were, but the headaches are very much improved, and also the general condition.

On 23rd August he weighed 10 st. 9¾ lb., as against 10 st. 7 lb. on 23rd May.

He left the Infirmary of his own accord on 3rd September, 1892.

Remarks by Dr. Anderson.—In this case the evidence of the syphilitic nature of the brain affection is not overwhelming, and the results of anti-syphilitic treatment were not brilliant. But, for all that, it is most probable that it had a syphilitic basis, while secondary non-syphilitic lesions may have resulted from the syphilitic affection, of the nature of inflammatory softening, &c., which, of course, could not be influenced by mercury or iodine. This result is far from uncommon, and hence the vital importance of making an accurate diagnosis, and of inaugurating treatment at the earliest possible moment.

4. *Copious Syphilitic Eruption, with Subsequent Head Symptoms.*

J. D., æt. 39, laundress, admitted to Ward VII of Western Infirmary, 30th April, 1892, in a torpid condition.

The patient's father died at the age of 64, her mother at 54, both of "paralysis." She is one of a family of seven. Of the other six one sister died at the age of 39 of "internal cancer." the remaining five are alive and well.

The history was obtained from a sister, who states that patient has all her life been very healthy, with the exception that seven years ago she had scarlet fever, for which she was eleven weeks in hospital.

About eleven weeks ago she complained of pain in her back and head, and a doctor was called in, who diagnosed influenza. From this she recovered in about a week.

Eight weeks ago the pain in her back and head returned, and rendered her unable to get about. Her sister does not know whether or not it was chiefly nocturnal. Three weeks afterwards a rash came out all over her body, and has persisted since then. A fortnight ago she fell into a state of stupor, in which she has continued since.

On examination, the patient is discovered to be in a condition of stupor, from which she can be roused when she is loudly spoken to. If told in a loud voice to put out her tongue she does so, and keeps it out until told to put it in again. There is no paralysis. The pupils are contracted, and there is a slight conjunctivitis in both eyes.

The whole body is covered with a copious dusky papular rash, most abundant upon the face, arms, and loins, where it is in some places almost confluent, less abundant upon the chest, abdomen, and extensor aspects of the thighs, and existing, although scantily, both upon the palms and the soles of the feet. The individual papules are mostly of large size, circular, dusky red, and occasionally distinctly coppery in colour. Many of them are surrounded at their bases by a collar of desquamation. They are flat-topped, only slightly raised, and unaccompanied by itching or irritation. Some are covered by small whitish scales, and into a few hæmorrhage has taken place. The eruption is manifestly syphilitic, resulting from recent infection.

On entrance patient's head was shaved, and an ice-bag applied; 5 grains of calomel were administered, and followed by a seidlitz powder. On the 1st of May frequent feeding was begun, and one-eighth of perchloride of mercury injected subcutaneously night and morning.

The stupor gradually deepened, and finally passed into coma. The patient died on the morning of the 5th of May.

On *post-mortem* examination a considerable subdural hæmorrhage was found, the blood covering in a thin layer nearly the whole of the convexity of the right hemisphere, and extending from near the base to very near the vertex. There was no other obvious lesion in the brain, nor in any of the other organs except the left lung, where a capillary bronchitis, accompanied by œdema, was found in the lower lobe.

CASE OF SPINAL TUBERCULOSIS ASSOCIATED WITH ABSCESS.*

By R. C. BRODIE, M.B., C.M.,
Late Resident Medical Officer, Royal Hospital for Sick Children, Glasgow.

(*With a Lithographic Illustration.*)

The case from which this specimen was obtained was under my care during my term as Resident Medical Officer in the Royal Hospital for Sick Children.

The preparation is now catalogued in the museum of the Western Infirmary, but I have thought it of sufficient interest to bring before the members of this Society along with the history of the case.

Andrew M., æt. 3½, was admitted to Dr. Finlayson's Ward in the Royal Hospital for Sick Children, on 15th July, 1892.

He was said to be suffering from slight cough, difficulty in breathing and general weakness, of five month's duration.

Previous to the onset of these symptoms his general health had been very good.

The first symptom noted by the parents was some irritation in the throat which caused his breathing to be wheezing in character. This was ascribed to bronchitis, which later developed into congestion of the lungs. The acute symptoms of this attack passed off, but the difficulty in breathing remained, and gradually got worse. This shortness of breath was worse at nights, and caused him to sit up in bed gasping for air.

There were never any choking fits, and his colour always remained natural.

There was only a slight cough and no expectoration. The voice remained clear all through his illness. He made no complaint of pain, and was able to swallow without difficulty.

Latterly he kept his head slightly retracted. He lost much flesh, and his appetite became very poor during his illness. His bowels were constipated. The family history was excellent, the father, mother, and other seven children being all alive and well.

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* Read at a meeting of the Glasgow Medico-Chirurgical Society, 13th January, 1893.

On admission he was noted as being a pale and delicate looking child. He was suffering from considerable difficulty in respiration.

His breathing was exaggerated and noisy, especially inspiration, which was accompanied at times by a distinct "crow," and there was also marked retraction of the intercostal spaces on both sides of the chest.

The head was strongly retracted, so that the occiput was resting between the shoulders, and kept fixed there by the spastic condition of the muscles of the back of the neck. Any attempt to move the head was attended by great pain, and tended to increase the respiratory difficulty.

He was able to move both arms and legs, but was unable to sit up for any length of time, as this greatly increased the difficulty in breathing. There was no marked projection of any of the spinous processes visible, but the examination of the upper dorsal spines was rendered unsatisfactory owing to the extreme retraction of the head. There was no tenderness to touch, and, indeed, no complaint of pain, unless on attempting to move the head.

No tumour could be made out on examining the neck and upper part of the chest.

A few râles were heard in both lungs posteriorly, but no area of dulness was detected.

The heart was found normal.

The pharynx was examined with negative result, and laryngoscopic examination was attempted, but found impracticable.

The urine was normal, as also were the abdominal viscera.

After admission patient's condition showed considerable variation. The respiratory trouble at times assumed an almost paroxysmal form, with periods of comparative comfort intervening. During these paroxysms, which were not of long duration, he showed signs of cyanosis which, however, passed off in the intervals.

He was able to swallow both liquid and solid food without any apparent discomfort.

His voice remained clear till the end.

The temperature never rose above 100·4° F.

For twenty-four hours before his death his breathing became much more laboured than it had formerly been, and he slept very little.

He died on 31st July, becoming suddenly cyanosed. A few minutes previous to this he took food without difficulty.

Tracheotomy was immediately performed, but without result.

At the *post-mortem* examination a tumour about the size of a large egg was found in front of the upper dorsal vertebræ, bulging forward on either side of the œsophagus.

The vertebral column was divided above, just behind the root of the tongue, and below near the bases of the lungs. The parts were then removed *en masse*, including the tongue, a portion of the first rib, and the thoracic viscera.

A longitudinal section has been made almost in the middle line.

The sections show that the bodies of the third and fourth dorsal vertebræ are affected. The anterior part of the former, and almost the whole of the latter, have been destroyed, so that a gap is left. There is some displacement backwards of necrosed bone and other structures, so that the spinal canal is much narrowed, the narrowing being increased by the curvature produced by the collapse of the bodies in front. The spinal cord is considerably flattened in consequence.

In front of the vertebræ is an abscess which was filled with semi-solid cheesy material. This extends from the level of the lower border of the body of the fifth dorsal upwards to the level of the upper border of the body of the last cervical vertebra, a distance of 2¾ inches. It bulges anteriorly, its cavity from before backwards measuring three-fourths to seven-eighths of an inch. The œsophagus and trachea are flattened over it, and there is a place opposite the first dorsal vertebra where the narrowing of the latter is extreme, its anterior and posterior walls being almost in contact. This place corresponds with the crossing of the aortic arch, which is here immediately in contact with the trachea. The abscess undermines the pleura for a considerable distance on both sides.

This case, in addition to showing very beautifully the pathological conditions of spinal caries, illustrates the adaptability of structures to pressure from a slowly-growing tumour. In the case of the collapsable œsophagus, this is perhaps not so much to be wondered at, still it is strange that the patient should have been able to swallow without any discomfort with such an impediment in the way.

It seemed to me remarkable that there should not during life have been marked evidence of laryngeal paralysis, looking to the fact that the point of greatest pressure seems to have been opposite the arch of the aorta where involvement of the recurrent laryngeal nerve might so easily have happened. How far a successful laryngoscopic examination would have altered this statement cannot be said, but, so far as one could judge from the quality of the voice, any loss of power in the vocal cords must have been slight.

The spinal cord, too, has evidently been subjected to very considerable pressure without any paralysis resulting therefrom, and this in a region where spinal caries is very apt to produce paraplegia. In this connection, I regret that I have no note as to the condition of the reflexes, but, so far as my recollection carries me, there was no exaggeration, such as often heralds a threatening paraplegia. I think in this case death must be directly ascribed to the abscess which some writers state is a rare cause of death in cases of spinal tuberculosis. The cessation of respiration may either have been due to the extreme narrowing of the trachea, a very small piece of mucus being all sufficient to make the occlusion complete, or, on the other hand, to a sudden increase of pressure on the trunks of vital nerves.

EXPLANATION OF ILLUSTRATION (FIG. 2).

THE ILLUSTRATION REPRESENTS A LONGITUDINAL SECTION NEAR THE MIDDLE LINE.

A, Tongue. *B*, Œsophagus. *C*, Larynx. *D*, Upper abscess cavity. *E*, Lower abscess cavity communicating with gap in vertebræ. *F*, Aortic arch. The œsophagus and trachea are seen to be compressed and narrowed between the aortic arch and the abscess.

FRACTURES OF THE NOSE, AND THEIR TREATMENT.*

By WALKER DOWNIE, M.B., F.F.P.S. G.,

Surgeon, Throat and Nose Department, Western Infirmary; Hon. Aurist, Royal Hospital for Sick Children; Examiner in Aural Surgery for the Fellowship of the Faculty of Physicians and Surgeons, &c.

MR. PRESIDENT AND GENTLEMEN,—In making a communication to this Society, I have chosen as my subject the treatment of fractures of the nose, as such injuries to this prominent feature of the face are by no means rare, and as, unless carefully treated, they result in such deformity as to seriously affect the patient's appearance.

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* Read at a meeting of the Glasgow Southern Medical Society, 16th February, 1893.

Fractures of the framework of the nose are produced in a variety of ways, but although the instrument varies, the violence is always of a direct character. It is unnecessary to discuss the various ways by which violence is exerted, but the following are among the more common causes described by patients who have been seen by me—namely, blows dealt by the fist or by a stick during a quarrel, or given accidentally, and falls from a height. Quite recently I had under my care in the Western Infirmary a boy of aquatic habits who, while deeply asleep, dreamt that he was at one of the public baths, and getting up, he took a header from a high kitchen bed on to the wooden floor, by contact with which he was rudely awakened, to find the shape of his nose seriously altered. In railway collisions, the nose is frequently fractured by contact with the forehead, or the brim of the hat, of the sufferer's *vis-à-vis*, and when produced by the latter the fracture is usually complicated by laceration of the soft parts. I have seen fractures so produced of the most serious character. Another set of cases are said to result from the pavement rising up and coming into violent contact with the face of the sufferer. Such is spoken of in jest, and is intended to cast doubts on the sobriety of the complainant. But while it is true that in the great majority of those cases the patient had been so elated as to be unconscious of his fall, yet there are exceptions, and that is why I refer to it. During the past six months I have seen two cases where, in sober earnest, the pavement did rise up and come into such violent contact with the patient's face as in both cases (one was under the care of Dr. Fenwick, of Pollokshields) to severely damage the nose. In each case the unfortunate individual was pursuing his way over a temporary pavement, consisting of planks loosely laid in line, resting on beams, and covering an excavation in connection with the Underground Railway workings. The plank which caused the injury had, in each case, been so placed that, when stepped upon, it at once tilted up with the result stated. Then I have had under my care fractures of the nose the result of a cricket-ball; and so common has fracture of the nose occurred on the football field of late that it has been recommended that those taking part in the game should wear a nose-mask. "This device to protect the nasal appendage during play" is, to quote a recent number of a public print, "a common sight on the football fields at New York."

Structures Involved.—The nasal bones, from their unprotected and prominent position, are those which suffer most frequently, and they may be the only portions of the framework which receive injury. The cartilaginous septum is, judging from my own experience, seldom fractured, but it is frequently dislocated when the blow received has been severe. Looking to its attachment and to its highly elastic nature, such a result is only what might be expected. When the blow has been very severe, or if it has been received laterally, the lachrymal bone and the nasal process of the superior maxilla on the side struck may be fractured, and in exceptional cases—confining our attention to injuries affecting the nose alone—the vomer and the central plate of the ethmoid may be fractured.

Associated with all fractures of the bones there is more or less tearing of the lining mucous membrane of the nose, accompanied by profuse hæmorrhage in all cases. In one railway case, which I saw along with Dr. Knox some years ago, the bleeding was so copious as not only to saturate the patient's clothing, and to cause him to lie in a dead faint for a very considerable time, but to place his life in danger before the arrival of surgical aid.

Deformity.—The size, form, and general appearance of the injured feature may be greatly altered by swelling and ecchymosis, the result of bruising of the soft tissues, and so great may the swelling be that the detection of fracture is difficult, in some cases impossible, and to clearly determine the structures involved is, at this early stage, out of the question.

When the swelling has subsided, or in those cases where the injury to the soft parts has been less severe, and there is little or no swelling, the deformity will depend on the structures fractured, and on the degree of displacement. The septum may be dislocated, and so much displaced, laterally, as to considerably narrow or even completely block one naris, without altering the contour of the nose. When, on the other hand, the septum, as a result of direct violence, is fractured or dislocated, and pushed backwards, the deformity is typical—namely, a deep depression immediately beyond the extremities of the nasal bones, and a slight tilting up of the tip of the nose. This condition is difficult to remedy unless seen within a very short time after the receipt of injury, and even then, when reduced, the dislocation readily recurs.

Fracture of the nasal bones themselves results in a more marked deformity. They may be flattened by fracture and dislocation backwards, when the nasal processes of the superior maxillæ become unduly prominent and the distance between the eyes seems increased; or they may be displaced to one or other side, and when this is associated with bending or dislocation of the septum, the curve given to the nose, as a whole, resembles a new moon. In cases where the lachrymal bones are implicated, the fracture may be complicated by emphysema of the eyelids and the cellular tissue around the orbit, the air gaining access to those parts through the torn lining membrane of the nose. When this complication exists, the patient must be enjoined to use the handkerchief with great caution until the parts are healed, as from the pressure employed in blowing the nose the emphysema is aggravated, and may become a more or less permanent condition.

Treatment.—When seen at the time of accident it may be necessary to apply means to check the hæmorrhage, and as, in such injuries, the tearing of the lining membrane is almost always confined to the anterior half of the nose, plugging of the posterior nares is seldom, if ever, required. The bleeding is most readily controlled in this way. Take a strong smooth probe on handle, and firmly coil round its free end a sufficiency of absorbent, or stiptic, cotton wool to make a pledget as thick as the fore-finger and fully half its length. So fixed to the probe, this pledget is passed along the middle meatus, and when it has been completely introduced the probe is gently withdrawn, leaving the cotton wool in position. Where hæmorrhage is very severe, it may be necessary to pass such a plug into and along the inferior meatus, after which a second and smaller plug may be similarly introduced into the middle meatus, and when these are in position, pressure may be applied externally by the patient grasping the nose between the thumb and first and second fingers.

After bleeding has ceased, and the swelling in a measure subsided, the fractured bones should be returned to their normal positions. It will be found in those cases where the fracture is limited to one portion, that on setting the fractured bone it remains set, and gives no further trouble. But where the fracture is of a comminuted character, and especially if this be associated with dislocation of the septum, it is necessary to apply some apparatus to support and retain the replaced fragments in position. Of the means employed I wish to speak in detail. The procedure usually recommended is to raise the fractured bones by the help of a director, metallic female catheter, or a pair of dresser's forceps, and where the deformity tends to recur to plug the nares with a long strip of lint, or with lint wound round a portion of a catheter, and to place a pad of lint on either side of the nose externally. These pads are kept in position by a strip of adhesive plaster passing over the bridge of the nose and reaching from ear to ear. In cases where the bones are at all seriously fractured, and those directions for treatment be faithfully carried out, the result will be disappointing. More than probably the patient will be found to have a more or less flattened nose when the apparatus is removed. The lateral support from the pads of lint is virtually *nil*, and the strip of plaster which is intended to keep those pads in position exerts pressure in a mischievous direction.

Many forms of apparatus have been introduced to retain the fractured bones in position after they have been replaced, and thus to obtain union of the parts with the least possible deformity. I have made use of many such, but for various reasons have discarded them in favour of the lead-mask which I show you, and which I apply in conjunction with intranasal splints, also made of lead. They are made of sheet-lead, and this material is chosen for two reasons—first, on account of the readiness with which it can be modelled to fit accurately any form of nose, or to exert additional pressure on any particular portion; and secondly, on account of its weight, which is an important factor in retaining the splints in the desired position.

When dealing with a recent fracture, after all bleeding has ceased, the fractured bones are manipulated into position by forceps applied within the nasal cavity, and by the fingers externally. Depressed portions are readily raised by the use of dresser's forceps introduced closed, and used as a lever, but when the fragments are displaced laterally, it is wise to employ forceps after the pattern of those recommended by Mr. Wm. Adams. Where the septum is dislocated it can be satisfactorily replaced by such forceps. After the various parts have been returned to their normal positions the intranasal splints are introduced. These consist of small portions of lead, in outline somewhat similar to an almond, and furnished with a wing on each side at the broadest part. These wings are bent over one side, so that when in position the flat portion of the splint lies in contact with the septal cartilage, and the curved wings lie against the inferior turbinated body. The pressure over the septum can be increased by separating the wings out from the body of the splint. When properly applied, they are firmly retained within the nares, and they so fix the septum in the middle line as to thoroughly support the fractured bones at a higher level. These intranasal lead splints are to be preferred to both Adams' ivory plugs and to Walshaw's vulcanite plugs. Both these forms are light, and readily slip out of position, and both, when in position, completely block the nose to the great discomfort of the patient. The lead splints, from their weight and method of adjustment, may be fixed in any desired position, and from the method of fixation the patency of the nares is ensured. These having been carefully placed in position, the external splint or mask is then fitted. It is made of one piece of sheet-lead, and consists of a nose-piece with the alar portions prolonged on each side to rest on the cheeks and give the splint steadiness, and a forehead part by which the apparatus is readily retained in the middle line and prevented from slipping downwards. The whole is covered by a layer of silk or linen fabric, fixed to its surface with gum or other paste. Before the splint is applied, it should be very carefully moulded to the desired form, and when adjusted it is fixed by strips of adhesive plaster.

When we have to deal with an old fracture, where union has long since taken place, and in such a way as to result in deformity, associated possibly with interference to respiration, it is necessary to carefully consider, not only the form of the organ, but the state of the patient's health, as the required treatment is more or less severe. To successfully treat a nose with a long-standing deformity the result of injury, the parts involved must in the first place be very thoroughly broken up; the mere twisting or cracking of one portion is never sufficient.

In the performance of such an operation, bleeding is apt to be a source of annoyance. Should it be of a free character, plugging, after the manner already described, may be resorted to, but slighter hæmorrhage is readily controlled in many cases by a 5 per cent solution of antipyrin (the hæmostatic properties of which were pointed out by Dr. Lennox Browne) applied by pledgets of cotton wool soaked in the solution, and left for a short time *in situ*.

When so broken up, the parts may be moulded at pleasure, and placed in such positions as to restore the normal contour of the nose, or even to improve upon its original form. Splints are then applied as already described, and in each case the splints should remain untouched for several days. At the end of four days the intra-nasal splints may be removed and not returned unless specially called for, and the external splint may be removed after six days, the parts inspected and the splint reapplied. It is never necessary to have it worn for a longer time than two weeks in all.

In thus introducing these splints to your notice, I may say that I do so after a lengthened experience of their usefulness, and I have modified them considerably since first employing them. I have used them in a variety of cases of fractures seen immediately after receipt of injury, and in those produced for the correction of deformity in patients under the observation of, amongst others, the late Sir George Macleod, Dr. Patterson, Western Infirmary; Dr. Knox, Royal Infirmary; Dr. Kennedy, Bearsden; Dr. Haddow, Govan; Dr. Strang, Thornliebank, &c.; and in my later cases I have by their help been able to obtain results of a very satisfactory character.

A CYSTIC GLIOMA OF THE CEREBELLUM, WITH ŒDEMA OF THE VENTRICLES.

BY JAMES PARKER, M.B., L.R.C.S.E., DOWANHILL, GLASGOW.

THE following notes are the record of a case which came under my observation about a year ago, and being of considerable interest to myself at the time, I have brought it forward to-night in the hope that it may likewise be of interest to the members of this Society.

On the evening of Tuesday, 8th December, 1891, there entered my consulting-room a tall and slenderly formed young woman, J. A. She bore on her features an expression of great sadness and anxiety, that conveyed to one an idea of mental depression from some cause to be discovered. On questioning her, she told me she was a housemaid, aged 21 years, and that her motive in seeking my advice was to get relief, if possible, from a severe headache located in the frontal region, and also a painful sensation over the neighbourhood of the occiput, passing downwards toward the cervical spine. She declared the headache to be unbearable and persistent, irrespective of the posture she might assume, and that recumbency had no influence in mitigating her sufferings. On further investigation, there could not be

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* Read at a meeting of the Glasgow Medico-Chirurgical Society, 13th January, 1893.

elicited any symptoms which could guide one in forming a definite or clear opinion as to what was the exact cause of her sufferings, further than the fact that, when present, the headache was persistent for a period of days or weeks, and very distressing, but that she had intervals of a few weeks' duration of freedom from it, when she felt in her usual health. She had been suffering at intervals for a year or eighteen months from it.

She was a girl of a bright and cheerful disposition when in health, but while suffering from the headache she was depressed in spirit, and quite unfitted for her usual occupation, which she could only perform in a half-hearted manner. With regard to her ordinary bodily functions she had no complaint to offer; her digestive system was in good condition, and also her menstrual periods.

Under such meagre and obscure information, one was forced to follow out a tentative plan in treatment, and endeavour, if possible, by a method of exclusion, to arrive at a diagnosis. This, however, is no easy matter where patients are so largely free agents, as occurs in private practice. On the supposition, therefore, that the girl was suffering from a neuro-anæmic condition, she was enjoined to rest herself as much as possible, to do her work quietly without over-exertion, and instructed to take a mixture of ammonia-citrate of iron and quinine in conjunction with aromatic spirits of ammonia; and requested to report herself as to the progress she was making in the course of a week or so.

Agreeable to arrangement, she returned a fortnight afterwards, and reported herself as feeling much better, quite free from her distressing headache. She was therefore enjoined to continue the treatment and rest which had been previously advised.

This assertion on her part of feeling better was rather misleading in the conclusions forced upon one, in feeling satisfied that a correct diagnosis had been arrived at in the first instance, and which subsequent events proved to be erroneous.

From this time I saw nothing more of the girl till Sunday, the 17th January, 1892, five weeks after the first interview, when, about mid-day, I was asked to go and see her in her master's house, as she appeared to those who saw her to be very ill. I at once responded to the request, and found her lying in bed, with her face turned from the light, in a semi-somnolent state, disinclined to be disturbed. It must, however, be clearly understood that there was no approach to coma or anything like it, as she at once responded, without any urging, when asked to turn towards the light, to put out her tongue, draw up her legs, or move her arms. Her chief complaint now was, as on the first occasion, a very depressing headache, with pain in the neck extending downwards towards the dorsal spine; there was also some sickness, which had commenced about two o'clock in the morning, the vomited matter being bilious in character.

Her pulse was regular, soft, and full; her temperature I was unable to record, as my thermometer broke at the time; her pupils, however, were dilated, but equally so.

Such a combination of symptoms impressed me very gravely; but, as on the former occasion, I fell back on the same expedient of rest and quiet, hoping that by this means the graver symptoms might possibly subside, and as being the only method one could follow in the obscurity of the case. I thought, however, I might be able to relieve the severe headache by administering small doses of antipyrine, with the least chance of complicating matters by inducing any tendency there might be to coma, so she accordingly got 15 grains at intervals of some hours.

The impression on my mind at this time was that there might be a condition of matters something analogous to what we might expect to find in tubercular meningitis, or the early stage of meningitis, in so far as a sudden effusion on the base of the brain may be considered similar.

On the same day, about 10 o'clock in the evening, I was hastily summoned with the report that those around her thought she was dying, if not dead. The report proved to be too true, for, on my arrival, life was extinct.

I gathered from those around her, who came daily into contact with her, that on the previous evening, namely, Saturday, 16th, she had been dancing, and had then declared that she never felt better in her life. It was usually always after such periods of excitement that she seemed to develop any indications of that staggering gait and severe headache which have been associated with disease of the cerebellum. The staggering was not referred to till enquired about, and was once noticed distinctly. The lady of the house told me also that on one occasion she had seen her doing her work away to one side.

One point more—she was conscious to within a short period of her death. This is borne out by her father, who was with her till almost an hour before the end, and he asserts that she answered his questions, though he was sitting at some distance from the bed, without any hesitation, although seemingly much disinclined to do so.

Post-mortem Examination.—With the assistance of a friend, I made a *post-mortem* examination thirty-six hours after death. Without going into details, I may say that the organs of the chest and abdomen were found to be in a healthy and normal condition, with the exception of the right lung, which was adherent in several places. On opening the skull the superficial appearances of the dura mater and brain seemed quite normal; but on endeavouring to remove the brain as carefully as possible from its basal attachment, the arachnoid was torn at the sella turcica, and there welled up, in a jet of at least two inches, a thick column of straw coloured fluid. To estimate the quantity accurately would, I think, be quite impossible, but I do not think I should be exaggerating in the least if I set it down as fully half a pint. Had there been nothing more found I should have been quite contented with the result of our examination, in so far as this corroborated my opinion or diagnosis of a sudden and rapid effusion on the base of the brain, however unsatisfactory it might have been, in giving no definite explanation of its source. But on division of the tentorium there was presented to view a thin walled cyst, of very delicate structure and quite transparent, lying between the lateral hemispheres of the cerebellum in the middle line, and having two very thin and narrow strands of brain matter stretching over it. On first viewing this cyst it was perfectly entire; it, however, unfortunately gave way. This was due to the very evident degeneration of the whole of the brain, as in attempting to remove it entire the cerebrum and cerebellum parted company. One point I wish to emphasise very strongly is this, that the cyst was absolutely entire after the rupture of the arachnoid. I saw a report in the *British Medical Journal*, of 19th November, 1892, p. 1108, where it is reported in the remarks at the end of the report, that "The rupture of the tumour and escape of fluid accounts for the manner and rapidity with which death occurred, by causing pressure on the medulla, &c."

This I do not believe to be the cause of death in such cases, as I cannot see how a cyst which has caused the absorption of all the brain tissue between itself and harder structures could secrete sufficient fluid to distend the ventricles and the theca of the spinal-cord so much as to endanger life. On the other hand, I do see how a cyst, gradually increasing without rupture, is a constant source of danger in this locality, but that were it to rupture it would at once clear the way for the absorption of the effused fluid in the ventricles, so that the period of danger is antecedent to that of rupture.

This I shall endeavour later on to make clear to you. The cyst wall was found to be quite free and unattached to the neighbouring structures, with the exception of one circumscribed point in the right lobe of the cerebellum, at which point could be detected a small nodule of condensed tissue, from which the cyst evidently sprang. I endeavoured to retain the relationship of parts by filling the cyst cavity with cotton wool, and immersing in spirits the cerebellum and tumour as a whole.

As to the nature of the tumour, I am indebted to Dr. Coats, who kindly examined it microscopically, and I reproduce the journal report here. There is one sentence, however, which needs modification, where Dr. Coats says, "It was visible on exposing the cerebellum separating the folia of the cerebellum." This ought more correctly to be the lobes, right and left, with two very thin, narrow (about one-eighth of an inch broad) bands of brain tissue stretching across its surface. With this correction the report is as follows:—

"The specimen, as brought by Dr. Parker, consists of cerebellum with a thin walled cyst occupying its central parts and projecting upwards in the position of the middle lobe." "It contained clear colourless fluid. It had been stuffed with cotton wool, which is with difficulty removed. The tissue of the wall is very soft and friable. Under the microscope this tissue has the character of neuroglia—namely, a finely reticulated fibrous structure, in which are sparce round cells. The cyst is attached deeply, and there is some solid tissue, especially towards the right of the middle line. This is partly brownish, and contains blood pigment, in irregular masses, and fibrine; but the greater part of it is soft white tissue, which, under the microscope, has the character of neuroglia.

"The cyst and tumour in the fresh state would be about the size of a tangerine orange."

It is, so far as I can gather, one of the commonest of cerebellar tumours and cysts.

The girl's family history is not of a very satisfactory character; her parents are alive and well; a twin brother is alive, but much addicted to alcoholism, so much so, that in his case it is looked on as a form of insanity, of which there was some obscure history on the mother's side; two other brothers died in childhood, one from "brain fever," the other from abdominal wasting.

I now wish to draw your attention to the point which has interested me most—namely, the effusion of a large amount of fluid into the sub-arachnoid space, over-distending the ventricles and the serous cavities of the cord, and, if possible, to elucidate what appears to me to be the cause of it. It seems to be a very common accompaniment of tumours and cysts of the cerebellum, as you will see by referring to the case quoted above, and also to two others in the same journal, on p. 81 of the epitome, reported by Williamson, and culled from the *International Journal of Medical Sciences*, August, 1892. So much was I impressed by the condition of things found, before and after death, that I put it to Dr. Coats what he thought might be the cause of this serous effusion, and he expressed an opinion that it might be the veins of Galen which were obstructed by the tumour. You will see, however, if you refer to your *Quain's Anatomy*, from which this drawing is roughly copied, with the tumour *in situ*, that the viens of Galen play only a secondary part in the matter, and I fancy direct pressure on them would not cause so sudden an effusion on the base of the brain, as, from their loose connection in the velum interpositum, they would be pressed aside. At any rate there would be other symptoms of pressure than œdema, as paralysis of some special nerve. On the other hand, referring to the drawings, one representing a vertical section a little to the left of the middle line through the skull, with the tumour *in situ*, the other the velum interpositum, with the veins of Galen and choroid plexuses, it must, I think, be quite evident that a tumour or cyst, situated in the middle lobe of the cerebellum, would press directly on the straight sinus, whenever its circumference began to pass the limits of the cerebellum itself, and as it increased in size it would tend in the direction of least resistance, upwards and towards the middle line, and thus occlude the large venous channels of the ventricles (and what more perfect seat for serous effusion, where the tissues are the most lax that can be found in the body?) by pressing together the walls of the straight sinus in the folds of the tentorium, which is tensely stretched across the cavity of the skull, resistent and inelastic. If this obstruction is continued for a sufficient length of time, the resulting œdema is bound to cause death by pressing on the vital centres of the brain. On looking at *Quain's Anatomy* (I quote from the seventh edition, p. 548), you will see that "the greater number of the veins" of the interior of the brain "terminate in two principal vessels named the veins of Galen, which run backwards on the velum interpositum, and passing out beneath the corpus callosum, pour their blood into the straight sinus."

In reflecting on the case, my thoughts ran in the direction of determining what relief might have possibly been given by treatment. In the patient's low condition I believe it would have been impossible, without fatal result, to have administered an anæsthetic so as to enable the use of a trephine to open the skull on Reid's base lines for cerebellar disease, as advocated by the last author referred to, though this might be quite practicable in cases where one was able to make a definite diagnosis at a very early stage of the disease. To attempt to trephine without the aid of chloroform or ether would very likely precipitate matters through shock. In this train of thought, I tried to formulate a middle course by which one might be able, without the aid of an anæsthetic or trephining, to relieve the tension of the brain cavities, and so gain time, if not permanent relief, by aspirating through the spinal canal.

I was enabled, by the kindness of Dr. R. M. Buchanan, to prove that this was a very easy matter to accomplish, and, with properly formed aspirating needles, might attain the object in view. On 29th December, 1892, in the pathological laboratory at the Western Infirmary, by making a deep incision through the skin and soft parts on the back of the neck of a *post-mortem* subject, about mid-way between the spines and transverse processes of the three or four upper cervical vertebræ, and then defining the position of two spinous processes, say the second and third, and at a spot in the bottom of the incision, midway between two imaginary parallel lines starting from the tips of these spinous processes, and passing round the neck back to the same point of starting, and inserting the point of an ordinary short curved needle, and pressing steadily, and in an obliquely upward and inward direction and parallel to the spines, we were able to pass the needle between the laminæ of the spinal arches, without the slightest hitch or difficulty, till it joined on the basilar process of the occipital bone; this, of course, one would not wish to do in trying to aspirate, but to pass it more in front of the medulla oblongata. I passed the needle a second time with the same ease, between the atlas and axis. The form of needle, which I think would be most serviceable, would be one with a long open curve, so as to avoid impinging on the bone in front. A more satisfactory result might be attained by passing a needle of proper form and shape upwards and backwards, with the hope of penetrating the cyst itself in the cerebellum, and so opening up the possibility of making a permanent cure. Should such another case occur, where I was able to arrive at as definite a diagnosis as in this case, I should not hesitate to try this expedient, anæsthetising, in the first place, the skin, and then making an incision deeply and freely, relying on the recognised insensibility of the deeper tissues to push my needle through, without giving rise to that shock one would anticipate in a severer operation, either in front of the medulla or into the cerebellum. One would be quite justified in so grave a case in resorting to anything which gave the least hope of relieving the symptoms of pressure.

In conclusion, I may say that on opening the skull of the *post-mortem* subject, and examining the base of the brain and medulla oblongata, no sign of injury to the pons or any of the nerves passing out from the side of it could, on close examination, be detected.

THE UTILITY OF MEDICAL SOCIETIES.*

By DAVID COUPER, M.D.,
President of Southern Medical Society of Glasgow.

The opening of a new session of the Society affords a good opportunity for discussing the value, in a professional sense, of such associations as our own. The topic is one which, as far as I can remember, has not within recent years been broached, and it has therefore the element of freshness to recommend it, as well as its own inherent interest. In the remarks I purpose making, I shall not attempt to exhaust the subject, but will be content to introduce it in such a manner as to induce discussion, from which I hope we shall be able to derive some profit, issuing in, it may be, an endeavour to increase the efficiency of the Society, and, at any rate, forming a fitting prelude to our winter's work.

Medical societies such as this exist for the mutual improvement of their members. This improvement is not limited to the increasing of professional knowledge, or of rendering it more precise, though it involves this also. It includes such endeavours as bringing the members into closer contact with one another, promoting friendly intercourse, and in a general way levelling all barriers which oppose themselves to intimacy and good fellowship. In this manner they render it easier for members to seek and obtain assistance in circumstances of difficulty and in cases of absence. These objects can, of course, be obtained in other ways than through the medium of a society; but there can be no question that the fact of fellowship in a common association facilitates in no small measure the courtesies of practice. But the term improvement may also be understood as applying to the financial interests of members as well as to those already mentioned, and this is a direction in which societies may exert a beneficial and legitimate influence. It is one which is recognised by our own alone of all the kindred societies of the city. The social status of the profession as a whole, and of its members individually, is another form in which mutual improvement is involved. This is a direction in which societies can be of the highest utility, and it is perhaps even more important than the mere financial improvement already spoken of. There are various ways in which societies can act. They can manifest their approval, in a very significant fashion, of the man of high aims and pure ambitions; they can create and maintain what is one of the most potent elements in human life—public opinion—primarily, of course, the limited public of the profession, but ultimately the opinion of the larger public around us in which we live and have our being. They can, besides, in a variety of ways, express their disapproval of mean and dishonest actions, and that without exercising anything of a disciplinary power. They can, further, if properly handled, act as peace makers, and enable disputes to be settled in their inception, which, if fomented, might lead to endless contest and ill feeling; and, by doing so, they would certainly promote social elevation by promoting social amity.

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* Being the President's Opening Address for Session 1892-93, delivered 10th November, 1892.

The word mutual, of course, means that efforts in improvement are not to be confined to a section of a society, but that all members, without exception, are to do their fair and honest share of work in carrying out the objects of the copartnery. In other words, there is no room for drones. When some content themselves with sitting and listening to the dissertations of others, or when these latter deem that they and they only are the duly qualified exponents of professional acquirements or professional aspirations, the *raison d'être* of a society is destroyed; it sinks either into a small mutual admiration coterie, or it becomes simply a convenience for such as, seeking social eminence rather than sound professional reputation, find in it an easy channel to the open sea of popular appreciation. A society for mutual improvement can never be a mere vehicle for private advancement, except such as naturally falls to those who, doing honest work and submitting it for free criticism, reap the reward justly due to such exertion.

As a matter of fact, however, we find that we have drones ourselves, that our meetings are poorly attended, that certain very superior gentlemen fancy they confer sufficient lustre on the society by allowing their names to appear on the roll, and paying or failing to pay their subscriptions; while others, against whom this reproach cannot be levelled, attend with sufficient, and, indeed, praiseworthy regularity; but, inspired apparently with the prudent maxim ascribed to Solomon, that "he that refraineth his lips is wise," they allow papers to be read, and demonstrations to be given, without opening their mouths to elucidate a difficult question, to criticise a doubtful proposition, to point out an error, or even to gladden the heart of the lecturer by the smallest mark of appreciation or gratitude. Another, and amongst ourselves a very small section, are those whose *metier* is carping and pragmatical opposition. Far be it from me to offer any objection to their presence; they animate the breasts of their opponents, they arouse their energies; the efforts to meet and successfully dispose of their carpings and fault-findings are unrivalled as means of provoking interest; and a field day, or rather night, on which they are present in proper force and form, is one whose memory does not soon fade. But it is kept green by the very bitterness which it excites. Though it is true these gentlemen relieve the dulness and tedium of some communications, and give a fictitious interest to certain questions, they do so at a high cost, in some cases losing the respect of their colleagues; and even when the consequence is not so grave as this, they convert the Society, let us hope only *pro tempore,* from one of mutual help to one of mutual hindrance.

How are these drawbacks to be overcome? By what means are we to convince the supercilious that they would find their account rather in attendance and co-operation than in sullen alienation—that it is a mean thing to wait the time when societies shall have made some approach to their ideal, rather than by their own exertions to teach us what the ideal is, and how to reach it? How are we to stimulate the lurdane, to convince them that though silence is golden, yet, after all, speech is silvern, and that a large and useful field is open only to the humbler medium? How are we to smooth down the acerbity of the fault-finders—to show them that their critical powers may be as effectually utilised when modified by sweet reasonableness as without it, and at the same time gain respect and approbation, instead of the interest inspired by the love of a scene?

These questions are easily put, as questions proverbially are, but it is not given to every one to answer them judiciously. This paper will, I trust, have the effect of stimulating effort to do so. We will, I trust, hear some practical suggestions made in the discussion which will follow. Allow me to submit one or two remarks in this direction for your consideration.

The more careful cultivation of the social element seems to me a most important factor in furthering the aims of our societies. As things are, we assemble too much for the purpose of hearing papers read, and giving extempore criticisms upon them; when the papers are ones which have occupied the author a considerable time in preparation, and which would require to be read and pondered over before any criticism of real value could be forthcoming. I am sure we all feel that many of the remarks made on excellent papers are vapid and inane to a degree. And this seems to me unavoidable as long as we continue the practice of encouraging these formal disquisitions, admirable and edifying as they undoubtedly are, whose points cannot be at once grasped in all their relations. I would not, of course, for a moment say a word in depreciation of any effort to add to our information in this direction. It is difficult for any of us to keep abreast of the knowledge that is always advancing, but the difficulty would become almost insuperable if we were to be debarred from hearing of the experiences and attainments of one another in our various fields of exertion. But I believe that the system we had in vogue a session or two back, of having periodical conversations, would be far more effectual as a means of drawing out the members. And in connection with this it might be wise to consider whether we should not endeavour to act up to the spirit, if not to the letter, of one of our rules, which says that every ordinary member, in his turn, is expected to read either the notes of a case, or a paper on some subject connected with medicine or general science. Now, if we say, "introduce a subject for discussion" instead of "read a paper," I think we might easily bring the object of the Society in this direction within the limits of the meanest capacity; for though it is possible to conceive of a person hesitating before committing himself to the preparation of a paper, it is difficult to believe that any one who has had the ability to get into the profession should be so destitute of intelligence as to be unable to inaugurate a discussion. Whether this idea may be practicable or not, I think it would be worth while to make the attempt; and perhaps the Council will consider the propriety of forwarding a requisition to some of our senior members, informing them that their turn had come. Many of these gentlemen, though contributing most valuable material in the course of discussions, have failed to do anything of their own motion. I have in my own mind one or two questions which I believe would be very good subjects for such conversations, as they would draw out from the experiences of the seniors information of the greatest value to the juniors, and afford these latter the chance of expressing their difficulties, and hearing what could be said in their expiscation.

Another mode in which our societies might find room for the exercise of the scientific and critical powers possessed by some members was suggested a year ago by our respected friend, Dr. Hamilton, and a similar idea seems to have occurred to Professor Gairdner. This was the appointment of a small committee charged with the examination of new drugs, foods, and appliances of all kinds, for obtaining independent analyses of them, and reporting the results to the Society. The uses of such a committee, supposing it to be composed of the right men, are obvious. And it is surely a task within the wit of man for them to carry out such functions in a way which would not expose themselves either to risk of legal damages, or the charge of unduly favouring one party to the injury of another. Such a society as the Southern Medical would be at no loss to nominate a very large number of members, of sufficient independence of judgment, as well as having properly balanced minds, not to be led astray by the voluble and extravagant professions of inventors, pharmacists, *et hoc genus omne*, who are daily soliciting our attention and support for their innumerable novelties. In other words, we require those who can discriminate between facts and fancies, between the "Wahrheit" discovered by test and examination and the "Dichtung" of interested vendors, and who could express their views with dignity and effect. Such a committee would not only, I believe, rid us of these interminable nuisances, the testimonials of heal-alls, which have been found so efficacious by their no doubt veracious but unreliable approvers, whose facile commendation is generously rewarded by the sight of their names and qualifications in type; but it would also, by separating the chaff from the wheat, do us a service of eminent value. And such a committee could be named here and now, if it could only be prevailed upon to accept office.

The question of fees is one which has received the attention of those who drew up the code of ethics of this Society; but the meagre information which the present tariff furnishes causes it to be of comparatively little value. At any rate I have found it so, though perhaps other members may think otherwise. Now, as most of us practise our profession for the primary object of making a living, and as we have devoted a considerable amount of time and labour to the acquisition of such knowledge and skill as we possess, the question of assessing the value of our services is one of some little interest. It is perhaps more so to the younger members of the profession, but it is also a matter of importance to the seniors. A proper scale of fees should not only guide us in our charges in a general way, but it should afford us such distinct and sufficient information as should guide us in all or nearly all our dealings; and not only in our dealings with patients, but with one another in such contingencies as often arise where one has to obtain the assistance of a friend in the performance of an operation, or to give chloroform, and so forth. In many of these cases I have noticed that patients and their friends think the services rendered are rendered to their doctors and not to themselves, and they demur to making any proper recognition of them. Such objections would be very effectually met by the production of a tariff showing that such services were recognised and anticipated, and that they had a distinct value, the obligation to meet which is as essential as the payment of an ordinary and uncomplicated bill. Such a tariff should also guide us in our dealings with such corporations as railways and other public bodies, and with firms who call us to attend to servants injured at their work. These services, rendered in cases of accident and sudden illness to such as these, are at the moment considered inestimable, but when the bill is forwarded a much more moderate view is taken of their value. The debtor forgets that the time expended at any of these emergencies is very often the least important element in framing the account. He is apt to forget that the dislocation of a practitioner's arrangements, and the care and worry involved in adjusting them anew, are very legitimate considerations when the cost has to be counted. An authentic tariff would, without doubt, be the best means of meeting any objections which might arise under such circumstances. In all matters relating to services rendered by us to insurance offices, police boards, courts of justice, the latter invariably forget that there are two parties required to make a bargain. With the greatest complacency they lay down the law as to what they will give in the event of such and such services being rendered at their instance. They are not, in some cases at least, careful to see that the terms they use when discussing the value of medical services is even more dishonouring to the profession than the pittance they offer as pay. And it is not to be wondered at, for the lack of anything like a feeling of solidarity among us almost invites such language and such treatment as I am alluding to. To my mind there is little doubt that the mean expressions which the Police Committee of Glasgow allowed themselves to use in their recent discussion on medical charges in cases of street accidents, as well as the conditions which they required to be fulfilled before recognising their liability, would not have been so pronounced if these gentlemen had realised that they were dealing with a united profession, respecting itself and putting a proper value on its services. I cannot imagine any more effectual method of maintaining our rights in any or all of these circumstances than the production of a tariff devised and sanctioned after due counsel and deliberation by such a Society as our own. Such a tariff, duly authenticated, would compel the respect of the public, and in cases of dispute between physician and patient, it could be referred to in law courts as a guide of authority.

But it is not exclusively to such questions that a tariff should be limited. It should take cognisance of what is now a very common method of securing medical services—namely, that adopted by friendly societies. There can be no question that the tone adopted by these bodies is as little to be relished as that of the Glasgow Police Board; and the reason is the same. They find the profession a disunited one; each member, they imagine, is anxious to do his neighbour a disservice if he can thereby help himself, and they are encouraged to persist in this view by the alacrity with which any vacancy in their patronage is run after. They find that for the smallest office any number of practitioners can be induced to become candidates—to underbid one another in the most unseemly fashion, and to run after those of their members who are, or fancy themselves, leaders. The consequence is that these mortals, whose self-esteem requires but little encouragement, conceive such an inordinate idea of the value of their appointments, and such assured convictions of the social and professional ruin which must be the fate of any of their doctors who are dismissed, that they assume so many airs, and are so difficult to satisfy, that the man who is successful in any of their candidatures is very often the last man who should be congratulated. We ought to lay down something like a fee, below which no member of this Society should be allowed to take such an office under pain of expulsion; and we ought, though this, perhaps, is not quite a relevant remark at present, to make it a condition of such service that the medical officer shall not be dismissed by decision of the friendly society alone, but only after consideration of any charges against him, either by our Court Medical or by a joint court named by this Society and by the society employing the doctor.

There is surely nothing extravagant in the notion that a society constituted like our own is capable of drawing up such a tariff as I have tried to indicate, and to formulate any regulations necessary to its proper interpretation. I am confident this task is well within its powers. No better opportunity of demonstrating its utility could be easily imagined, and if the task were done in a business-like manner, we should deserve and earn the gratitude of the profession in the West of Scotland, and, probably, of our legal brethren also, who would, I doubt not, welcome any authoritative deliverance on the subject of medical fees.

Another way to promote the utility of our societies is one largely taken advantage of by the New York Dermatological Society, but which, as far as my knowledge goes, is either unknown or ignored on this side of the Atlantic—I mean the presentation of cases for diagnosis. In the society mentioned, there seems to be hardly a meeting at which one or other of the members does not bring up a case whose nature he has not satisfactorily made out, and which he submits to the judgment of his colleagues. These difficult or rare cases are not presented by the novices alone, but by men of the highest standing, and they are discussed with the utmost freedom. It is true that the opinions elicited are not always unanimous, but the discussions are none the less valuable on that account. The differences of opinion, the different points of view from which the cases are examined, the different experiences appealed to, all operate in favour of a more complete elucidation of a case than any other method of consultation with which I am familar. Of course, in dermatology, though the domain of disease is the most patent in the whole nosology, our efforts to map out the field and define with accuracy the limitations of the various pathological processes has, as yet, met with only partial success, and there is abundance of room for debate. But in other departments—disease of the lungs, the heart, the liver, and so forth—I venture to think that a notable service to the profession would ensue if cases were brought forward here for mutual information. The benefit would be felt by the older members just as much as by the juniors, for while these might profit by the matured experience of those, the former would also derive advantage from learning the newer methods of those fresh from the schools, as well as hear the most recent ideas prevailing amongst our leaders in the profession.

Such ends and aims as those mentioned may be said to belong to the purely private affairs of the profession. Though they affect us all in a greater or less degree, they do not possess the importance of questions of public interest, in some of which medical societies may claim to be with justice the proper leaders of public opinion. No one can doubt, for example, that medical evidence in, let us say, several cases, does not carry with it that weight and authority which it may seem to deserve. It is so easy if you get one man to say one thing, to get any number to swear to the contrary, and this fact is so notorious that the opinions of our fellows are discredited in the public estimation, and physicians and surgeons of the highest standing are looked upon and spoken of as mercenary empirics—as counsel for parties rather than impartial witnesses, and I have been informed, though I cannot vouch for the truth of the statement, that cases in which the medical testimony was of much importance have been put into such a state of chaos by the diverging views and assertions of the medical experts engaged, that that portion of the evidence has been thrown overboard altogether, both for and against, and decisions arrived at quite independently. Now, the obvious reform which should be aimed at is the appointment of medical assessors, either in the way in which nautical assessors are appointed, or as permanent officials. This reform in judicial practice belongs, in the first instance at any rate, to medical men, who ought to resent the manner in which professional attainments are utilised, or rather not utilised, in courts of justice. But the question is never raised until some such case as the Maybrick murder trial comes up, when there is the usual outcry, followed after the proverbial nine days by the usual apathy. This is, of course, a question of the utmost importance in the public interest, but any effort to stimulate public action must be initiated by ourselves.

Questions of public health are appropriate subjects for debate amongst us. No one can say that the last word has been uttered in regard to at least many of the topics which are included under this general term. To take the most common form in which we are brought into relation with preventive medicine—viz., vaccination, the profession is the only body of men properly qualified to guide public opinion, and yet, for all that it has to say on the subject, public opinion may go as far astray as it likes. I do not mean to say that we have said nothing on the subject, for that would not be the case. Many books and pamphlets of value have been issued by our members, giving reasons for the faith that is in us in regard to vaccination, but these do not affect the question, for the public, as a rule, do not read such works, and the only way they can be got at is by private argument, and by discussions and articles in the press and periodical publications. Now, we cannot all get up the facts at first hand, but they can be presented to us by those who take a deeper interest in them than others, and we could thus be furnished with ideas as to the proper course to take when involved in a discussion on the subject.

The notification of certain infectious diseases is, I believe, a step in the right direction, but it is only a step, and unless it is followed by another, it is, in my view, comparatively useless as a preventive measure. The public ought not to be satisfied when its officials have knowledge of the existence of infectious diseases in such and such families and districts. That information may be, and doubtless is, useful in its way, but its possession does not necessarily imply that all risk of spreading the evil is thereby obviated. The community ought to insist that every person who is reported to be ill with infectious disease shall be under competent medical supervision until the day the danger is at an end. This medical supervision might be exercised either within or without an hospital, but that it should be exercised, I submit, admits of little doubt. The proper channel for bringing this idea and similar ones before the public is our Society and its congeners which, by discussing such ideas and elaborating methods and means of administration, might furnish to our legislators the light and leading they require.

In addition to these spheres of utility, our societies may readily find many directions in which their activities may have the fullest play. In all questions of medical politics, the direct representation of the profession on the Medical Council, the criticism and, if need be, the promotion or opposition of bills affecting the body medical for good or evil, the societies furnish not only a channel by which the ideas of the profession may find a voice, but they can also supply the brain power which forms and directs professional opinion. They offer a ready arena for all those who wish to display their capacity, or want of it, for leadership. And they have a still further field of usefulness, as the means by which the judgment of the cloth can be brought to bear effectually on questions of medical education, hospital management, &c. In all of these questions, the fact that there was an intelligent and alert body of men, considering their various aspects and having the power and ability to express their opinions, would act as a powerful force on those who assume their direction. In the treatment of the poor, in the utilisation of parochial hospitals and asylums, the voice of the profession might be, and ought to be, the chief determinant of policy. The managers of our infirmaries, those who hold the patronage of public appointments, would probably find it convenient to pause and ascertain our wishes and our views before they appointed the most influential candidate to a position of trust and honour with only a superficial qualification to support it, if they knew that their action would be condemned if it were unsound. Our profession is not sufficiently assertive. It forgets that it is one of the most useful. As a consequence, it has fallen into disrepute as far as its claims to be a factor in the world's progress is concerned, and the public considers its actions are inspired by the most sordid considerations. These drawbacks we have it in our power to reform. Our united voice can be made as powerful in all circles as that of any other class or profession. But any effort to increase the respect due to us from the public must come from ourselves, and the first step in this direction must be taken by showing that we respect one another. We are too ready to sneer and carp at one another, too ready to fall in with depreciating remarks on our fellows, too ready to occupy their places when they are dismissed, too ready to forget that the profession has its solidarity as well as others. The remedy for this state of matters is not to be found in isolation and disinclination to meet and confer with our brethren, but it will be found in the free and informal mingling with one another, of which our own Society affords one of the happiest examples.

CLINICAL REPORTS FROM THE GLASGOW SAMARITAN HOSPITAL.

BY J. K. KELLY, M.D.

I.—TWO CASES OF ABDOMINAL SECTION.

1. *Myoma Uteri—Difficulties of Diagnosis—Difficulties in Operation—Bronchitis after Operation.*

Mrs. K., æt. 50, was married at 19—*i. e.*, thirty-one years ago, and has never been pregnant. Her menses, which were perfectly regular from the age of 14, ceased three years ago at the age of 47. Since then she has twice had a discharge from the vagina "of dark-coloured blood, with a foul smell but no clots. Each time the discharge lasted for three or four days, and was preceded for two or three days by pain in the loins, and the pain continued during the discharge." The first of these discharges occurred in October, 1890; the second a year after, in October, 1891; and it is now almost exactly another year since it occurred. For the last three years—*i. e.*, since the menopause, she has had severe pain near the umbilicus, and this has been gradually getting worse. For the past four months she has suffered severe pain during sexual intercourse, and for the same time she has felt something falling down and pressing on the rectum. The only other fact I need mention is that, twenty years ago, she was in the Royal Infirmary with an abscess which discharged at the umbilicus after being poulticed.

Such being the salient points in the history of the case, what did we find on physical examination? She had been examined at the dispensary, and there a diagnosis of cystic disease of the ovary had been made—*i. e.*, I understand, the physical examination had revealed a sac containing fluid, and situated in the region of the ovary.

On 27th October, three days after her admission, I dictated the following report:—"On vaginal examination, a rounded, tender, elastic tumour is found occupying the left half of the posterior division of the pelvis, passing with its right border rather beyond the middle line. The cervix uteri seems normal, and the os is quite distinct to the finger, the cervix being apparently of normal size. The sound, however, cannot be introduced through the os. On examination *per speculum*, the cavity of the cervix is found almost completely atresic, a small surgical probe passing with difficulty about an inch. The ovaries are not felt. Dr. Kelly suggests that the cervix should be opened up with a view to determine whether the tumour felt is the uterus distended with fluid above the atresic cervix." I may say that I inclined very strongly to the belief that we had here a hydrometra, and I was confirmed in this by the history of those two discharges, at a year's interval, of fluid which had apparently accumulated somewhere in the genital canal.

At a consultation on 28th October it was decided that I should perform the operation suggested, and if the tumour were not found to be a hydrometra, that I should afterwards proceed to abdominal section. On 31st October, accordingly, "the external os was incised. With some difficulty a probe was introduced into the uterus; the cervix was then dilated with Ellinger's dilator, and a strip of iodoform gauze introduced into the cavity of the uterus, and left in. No communication was found between the interior of the uterus and the tumour in Douglas' pouch above mentioned." It was not then a hydrometra with which we had to deal. The first diagnosis was probably the right one, and we had after all an ovarian cyst.

On 4th November—"Laparotomy this morning. The abdominal wall, which was found to be about 3 to 4 inches in thickness, was opened by an incision about 3 inches long, which, in the course of the operation, was lengthened to about 5 inches. The intestines were adherent to the anterior abdominal wall, and had extensive adhesions among themselves. The tumour in the pelvis was reached with great difficulty, was found to be a myoma, and, as it was found impossible to remove it, a suture was passed through its wall, and it was carried forward out of Douglas' pouch after separating it from its adhesions there, this suture being afterwards tied externally round a glass drainage-tube laid across the wound. The abdominal wound was sutured with catgut, deep and superficial sutures alternating. Iodoform was dusted over the wound, and iodoform gauze laid along. Two strips of adhesive plaster were then put across the abdomen, covered with a pad of salicylic wool."

The condition found during operation explained to some extent the difficulty we had in the diagnosis. The enormously thick abdominal wall and the intestinal adhesions together rendered the palpation of the abdomen and the bimanual examination quite unsatisfactory in their results. The matting of the organs in the pelvis, and the adherent intestines over the tumour, gave it that feeling of elastic resistance which made us regard it as a sac containing fluid, and did not suggest at all the idea of a solid tumour such as we found it to be.

With regard to the adhesions to the anterior abdominal wall, are we to refer them to the inflammation which resulted in abscess discharging at the umbilicus twenty years ago, or are we to associate them with the pains in that neighbourhood which she has felt chiefly during the past four months?

The after-course of this case was complicated with a severe attack of bronchitis, which began the night after the operation, and gave us some anxiety for four or five days lest the severe cough should throw too great a strain upon the sutures, which were already sufficiently strained, one would suppose, by the great thickness of the wall. By the 10th November, however, the bronchitis was checked, and it completely disappeared before she left hospital. The question has been raised whether this bronchitis might have been due to the chloroform, of which 3 oz. were used, given on a towel. I incline rather to the belief that it resulted from the exposure of the chest and abdomen, which were perhaps rather freely uncovered during the operation, which lasted about an hour.

On 14th November, ten days after operation, we found that there was some oozing through the dressings, and at once I concluded that some of the sutures had given way. We found, however, that the oozing was due to hæmorrhage from one of the stitch punctures, and that the wound was already completely united. The sutures were still unabsorbed. The suture tied round the glass tube also showed no sign of yielding.

On 23rd November we again removed the dressings. The catgut sutures had then been completely absorbed, and the glass tube came away along with the wool pad.

On 30th November the woman went home feeling better than she had done for years.

2. *Ovarian Cystoma in Old Age—Repeated Tappings—Uncomplicated Operation.*

Mrs. R., 68 years old. She began menstruating at 16, married at 38, had one child thirteen months after marriage, ceased menstruating at 50, and has never since had any vaginal discharge. She was admitted on 10th November with an enormous abdominal swelling, her girth at umbilicus being 41 inches, from umbilicus to ensiform cartilage 9½ inches, and from umbilicus to symphysis pubis 7½ inches. She first observed this swelling four years ago, when it occupied a central position in the abdomen, and was about a fourth of its present size. When we examined it we found it to possess the typical features of an ovarian cyst. It was rounded and elastic, and had a well defined outline; percussion on one side of it transmitted a distinct wave to the other side, the bowel sound could be made out all round it, and the dulness remained central in all positions of the patient. On deep palpation, also, we could distinctly make out secondary lobules in parts of the tumour. What raised a doubt in our minds was the fact that she had been tapped on seven several occasions (September 1889, June 1890, March 1891, October 1891, May 1892, July 1892, October 1892), and the physician who had tapped her inclined to believe that the fluid drawn off had the characters of ascites. The woman herself, however, reported that the fluid drawn off this year was brownish in colour, with jelly-like matter in it. There was a remote possibility that the case might be an encysted peritoneal accumulation, and if so, the lobules felt in it or upon it might be of a malignant or papillomatous nature, but the history did not point to malignancy, and we considered that, even if it were malignant, we were justified in opening the abdomen. When we did this on 17th November, we found a typical ovarian cyst springing from the right side, and quite free from adhesions, and, indeed, from any complication whatever. In the journal Dr. Howie's report of the operation is as follows:—

"*17th November.*—Operation by Dr. Kelly to-day under chloroform—2½ drachms given by Junker's inhaler. Incision made in middle line, 4 inches long, through skin, muscles, cellular tissue, and peritoneum. Then a very large ovarian multilocular cyst was exposed—one large cyst and a number of smaller ones in its wall. The cyst was then tapped, and about 2 gallons of dark greenish-yellow fluid, with a good deal of colloid matter in suspension, was drawn off by Dr. Spencer Wells' trochar. A small amount of the cystic fluid got into the peritoneal cavity, but was carefully mopped out by sponges. There were no adhesions to the cyst, and the whole tumour could be removed. A double catgut ligature was passed through the centre of the pedicle, and the pedicle tied in two halves. The peritoneal edges of the abdominal wound were brought together by fine catgut sutures, and then the abdominal wound was closed by deep catgut sutures with finer ones between. Dressings—iodoform, iodoform gauze, salicylic wool, and abdominal bandages.

The after-course of this patient has been entirely free from complication. There was even almost no chloroform sickness, and there was no vomiting whatever, which is very remarkable in such a case. I was agreeably surprised by the absence of adhesions here, for there were two facts which led me to fear that we should find them. The first was the frequent tapping, but in spite of this the wall of the tumour did not present the slightest evidence of injury, and I did not see a cicatrix even on the abdominal wall. The second fact was the existence of very distinct friction, especially over the left side of the tumour, when she came into the hospital. This rubbing, which was quite perceptible to the feel, disappeared before the operation, and I expected to find some attachment of the tumour to the abdominal wall at that part. On 2nd December I changed the dressings for the first and only time. We found the wound completely and firmly healed, the abdomen perfectly flaccid and painless, and in a few days this old woman left the hospital.

THE EXAMINATION OF THE EYE.

By FREELAND FERGUS, M.D.,
Surgeon to the Glasgow Eye Infirmary ; Lecturer on Ophthalmology.

(*Continued from* p. 265, vol. xxxvi.)

We come now to a most important subject—viz., the testing of the power of convergence and of divergence, or, as Landolt calls divergence, negative convergence. To our mind, there is no doubt whatsoever that errors of the functions of the recti muscles, more particularly of the internal and external recti, are a most frequent source of asthenopia. Quite recently, Rossa has tried to prove that all such cases are nothing more than an astigmatism, and, therefore, should be treated by cylinders, and not by prisms. We have the greatest possible respect for anything so great and learned an ophthalmologist may say, for Rossa admittedly holds a foremost position, but we think that in this matter he has made a mistake. We have seen many cases that were most unquestionably cases of "muscular asthenopia," and which prismatic glasses quite relieved. We regret to differ from so eminent an authority, but we are aware that we do so in the company of almost all our *confrères* who are entitled to speak on the matter. Just as a young surgeon would be contemptible who refused to adopt newer and better methods of operation because they had not been favourably regarded by a senior, so would we be remiss if we did not fully state what we believe on this important subject.

And let us, in the first place, observe that possibly some practitioners do not believe in these muscular errors, for the good reason that they never look for them. We fear that too many surgeons are quite content to see any number of patients without ever testing, even in the roughest manner, their power of convergence. Again, a great number make but a very partial examination of the refraction, and never take time to investigate thoroughly this somewhat more difficult problem of practical physiology. While acknowledging, once and for all, that in many eye affections the constitutional condition of the patient is of the greatest importance, and must receive most careful consideration if our treatment is to be of any use, still, we fear that sometimes there is a tendency to overlook obvious physical disturbances. Thus, J. C., a man of about 60 years of age, has been taking iodide of potassium for about seven months for dimness of vision in both eyes. Why this has been ordered we do not know, for all we can find wrong is incipient cataract in the right eye, and 2 D of hypermetropic astigmatism in the other. The ophthalmometer shows at least 2 D of astigmatism in the eye that is becoming cataractous. When the astigmatism of the left eye is corrected, the vision is remarkably good; and we do not believe that there is anything constitutionally wrong with the patient. It is all very well to write a number of prescriptions and to dignify them with the name of constitutional remedies, but they ought never to be employed, as a sort of routine practice, without due consideration of possible physical errors. It will not do, when we see pallor of the disc, immediately to prescribe nux vomica without first investigating the probable changes in the nerve producing paleness, nor to prescribe bromide of potassium whenever we find redness of the disc. In most cases, we believe that it is the surgeon's first duty to examine the physical state of the eye, provided such an examination is at all possible, and to avoid all routine.

At the end of this section we shall give a number of cases which, to our mind, are sufficient evidence of the existence of this form of asthenopia; in the meantime, we content ourselves with a general discussion of the subject, and with a description of how the examination of the function of convergence should be conducted.

The general theory of binocular vision may be said to rest on the similarity of the two retinæ. Thus, when an object in nature is focussed exactly on the macula of each eye, then both eyes project it to the same point in space, and the object is seen singly. If, however, from some deficiency in the balancing arrangements of the eyes, one object is focussed on one retina, not on the macula, but at some other point of its surface, then diplopia is likely to result. In some patients there is a strong tendency towards this diplopia, which can only be overcome by a correspondingly strong muscular and, therefore, nerve effort on the part of the patient. Hence the asthenopia. Wherever there is divergence there is apt to be crossed diplopia, while convergence is likely to give rise to homonymous diplopia.

At this point we think it well, for purposes of greater clearness, to call the attention of the student to what may be termed relative as distinguished from absolute divergence. Let us suppose that one eye converges and fixes an object at 1 metre distance from the eye, while the other eye has its optic axis directed to a point say 2 metres from the patient. Here the two optic axes do actually converge, still there is relative divergence, and if there is diplopia at all, it will be crossed. If, on the other hand, the eye which is not used for fixation has its optic axis directed to a point somewhat nearer than the point of fixation, then there is, of course, convergence. It is important for the student to remember the difference between absolute and relative divergence, and to bear in mind also that both forms are accompanied by crossed diplopia, as otherwise he is apt to get into confusion.

Although muscular anomalies most frequently affect the lateral movements of the eyes, yet not infrequently do we find that other muscles, such as the obliques and the superior and inferior recti, are affected. The accompanying table gives a list of the various forms of diplopia likely to be found in muscular errors. The student will derive much assistance from a consideration of the action of each individual muscle. It is only by a thorough knowledge of the function of each muscle that the subject of diplopia can be mastered; it is all very well to commit the contents of tables to memory, but true knowledge of the subject consists in being able, from the clinical data of any particular case, to say at once what muscles must necessarily be involved. This, we repeat, can only readily be done by one who has a competent grasp of this department of physiology. And here a difficulty certainly arises; descriptions of what may be called clinical processes, no matter how fully and carefully written, can only but inadequately convey instruction; he who would master them must do so by the study of actual cases and by painstaking investigations.

TABLE OF DIPLOPIA.

NATURE OF DIPLOPIA.	MUSCLE INVOLVED.	DIRECTION IN WHICH DIPLOPIA INCREASES.
Homonymous, with images on same level.	External rectus.	On moving object outwards.
Crossed, with images on same level.	Internal rectus.	On moving object to sound side.
Vertical and crossed.	Superior rectus.	On moving object upwards.
Vertical and crossed.	Inferior rectus.	On moving object downwards.
Vertical and homonymous.	Superior oblique.	On moving object downwards and outwards relatively to affected eye.
Vertical and homonymous.	Inferior oblique.	On moving object upwards and outwards relatively to affected eye.

Let us first of all consider the muscles involved in the movements of each eye separately, and then we shall notice the muscular arrangements for their conjoined movements.

As all know, there are six extrinsic muscles for each eyeball —viz., the rectus superior with the rectus inferior, the rectus externus with the rectus internus, the obliquus superior and the obliquus inferior. The last two can hardly be regarded as having any special action of their own, for they are chiefly of use as subsidiary to other muscles. Thus, the inferior oblique is, as a rule, used in combination with the superior rectus; while the superior oblique is, as a rule, used in conjunction with the inferior rectus. The superior oblique has, without doubt, a prominent part in the downward and outward movements of the eye; for paralysis of its special nerve leads to diplopia in that direction. Paralysis of the inferior oblique does not occur so often as an individual and isolated condition, but is generally accompanied by paralysis of the sphincter of the iris. The superior oblique is much more called into play than the inferior, for, as we have just seen, it is concerned in all downward and outward movements; and even in most downward movements it must be much oftener used than the inferior, because upward vision is not nearly so frequent. Hence, loss of power in this muscle is much more likely to produce diplopia than paralysis of the inferior, or at least a diplopia which is likely to attract the attention of the patient.

Were the external and inferior recti the only muscles concerned in downward and outward movements, and were such movement the resultant of their united action, then not only would the eye move downwards and outwards, but from the oblique action of the inferior rectus, the upper part of the perpendicular meridian would be rotated outwards. Unless there were simultaneously a like rotation of the other eye the images would be formed at unsymmetrical points of the retinæ, and there would be diplopia. The superior oblique prevents this rotation, and most probably has a considerable direct influence in moving the eyeball downwards and outwards. In a precisely similar manner the inferior oblique counteracts the tendency of the superior rectus to rotate the whole eyeball upwards and inwards. Were any individual oblique muscle to act by itself, then there would necessarily be a rotation round an axis closely corresponding with the antero-posterior axis of the eyeball or with that of vision. Now, if such a rotation did take place, the bilateral symmetry of the two eyes, at least so far as the identical points are concerned, would be broken, and there would necessarily be diplopia, unless indeed it were prevented by a similar rotation in the other eye.

Let us, then, briefly recapitulate the action of these muscles. The superior rectus pulls the eye upwards, and rotates the upper aspect of the cornea inwards. The inferior rectus turns the eye downwards, and rotates the upper part of the cornea outwards. The external rectus moves the eye directly outwards, while the internal rectus rotates the eye directly inwards. The superior oblique checks the outward rotation caused by the inferior rectus, whilst the inferior oblique checks the outward rotation of the superior rectus.

It is generally believed, and we think quite accurately, that each eyeball has only one centre of rotation, which is situated at about 14 mm. from the cornea. The primary rotations of the eye may be regarded as performed about two axes—one of which passes perpendicularly through the point of rotation, whilst the other passes through it horizontally at right angles to the line of sight. There is no rotation round the antero-posterior axis. All the movements of the eye are thus composed of rotations round one or other or both of these axes. The only movements in which only one set of muscles are involved are those round the perpendicular axis. Rotation directly outwards is effected by the external rectus muscle alone, and rotation directly inwards by the sole action of the internal rectus. All the other movements require the combined action of two or more muscles. We think it better to give a complete list, but every student should be able to work them out for himself.

TABLE OF MUSCULAR ACTION.

MOVEMENT.	MUSCLES.
Directly upwards.	Superior rectus and inferior oblique.
Directly downwards.	Rectus inferior and superior oblique.
Directly outwards.	Rectus externus.
Directly inwards.	Internal rectus.
Upwards and outwards.	Superior rectus, external rectus, and probably inferior oblique.
Upwards and inwards.	Rectus superior, rectus internus, the rotation of the rectus superior being checked by the obliquus inferior.
Downwards and outwards.	Rectus inferior, rectus externus, obliquus superior.
Downwards and inwards.	Rectus inferior, rectus internus, probably the rotation of the rectus inferior is checked by the obliquus superior.

From the preceding tables of diplopia and muscular action, we can deduce a system of testing the various varieties of diplopia that occur in practice. Let us repeat again that when we have convergent strabismus with diplopia, then the diplopia is homonymous; but if there be divergence, either relative or absolute, the diplopia must be crossed. In actual practice, we must make sure that both eyes have some vision, and it is well to ascertain the exact amount of visual acuteness by the methods already described. That being arranged, there are two points which claim our special attention—(1) Is the diplopia crossed or homonymous? (2) In what direction or directions does it increase? Suppose a patient has diplopia, and, on shutting the left eye, we find that the right image —*i.e.*, the one situated on his right hand, is no longer seen, then we know that the diplopia is crossed. Did the image situated on his left disappear, then the diplopia must be homonymous. In some cases, for the sake of identity, it is well to place a piece of coloured glass in front of one eye. That naturally causes the image of that eye to be seen of the same colour as the glass. If the vision of one eye is less than that of the other, the glass should be put in front of the eye with the better vision, so as to equalise the two as much as possible. By one or other of these two methods, little difficulty is experienced in determining the nature of the diplopia, at least for those varieties of it which affect the lateral movements.

When difficulty does arise, it proceeds from the tendency which both eyes have to overcome divergence and convergence in the interests of binocular fixation, without which there cannot be the sense of perspective. The value of this sense is, perhaps, best illustrated by the stereoscope. A careful study of that instrument is of the greatest service to the ophthalmologist. This is not the place to give any description of it, but the use of binocular fixation will be at once apparent to anyone who first looks through a stereoscope with one eye shut and, while doing so, opens the other. Therefore, suppose that the external rectus of one eye is weak, a patient, when asked to look at an object, may very readily call his weak muscle into greater action in order to give him for the time being the sense of perspective. This natural tendency to binocular fixation may, however, be overcome, and thus a diplopia, which is not under ordinary circumstances apparent, may become manifest. The oldest way of overcoming the tendency to fusion was to put a prism before one eye, with its base in a perfectly horizontal direction, and either turned upwards or downwards. When this is done and some object, such as a lighted candle, is looked at with both eyes open, then the image formed on that eye which has not the prism in front of it is at the normal level, whilst the image of the other eye is either at a higher or lower level, according as the base is above or below the level of the pupil. Be it remarked, however, that when the image is formed at a higher level, the eye will see it at a lower, and *vice versa.* The tendency to combine images, which would otherwise give rise to diplopia, is only found when the images are formed on the same level on each eye, or nearly so. By the use of the prism this tendency is therefore destroyed, and the eyes follow any pathological inclination, either to convergence or divergence. In ordinary practice, it suffices to place in front of one eye a prism of 10 degrees. Roughly speaking, such a prism, when held in front of an eye so as to give its angle of minimum deviation, displaces objects about 5 degrees. This is not perfectly accurate, but it is accurate enough for clinical purposes. We shall presently see that the inaccuracy has of late years made us put the old method of numbering prisms completely aside, and to number them according to the prism diopter, or angle of minimum deviation.

Let us then suppose that the patient is supplied with such a prism, and that he is asked to look at an object—say a lighted candle. If the vision of both eyes is satisfactory, then he will see two lights, one of which is in its normal position, while the other, seen by the eye with the prism in front of it, is at either a higher or lower level according as the base of the prism is below or above the level of the pupil. We now ask the patient if the one image is directly above the other, or if it appears to him to be a little to one side of it. If it does, there is some tendency to diplopia, and the amount of lateral displacement indicates the amount of error. Let us now ask the patient to close one eye—say the right. If the right hand image goes out, we know that there is convergence; but if the left, divergence. Some idea may at once be arrived at as to the muscle which is affected. Take the case of convergence. Overaction of any muscle is exceedingly rare. Such defects almost invariably arise from want of action, and hence we may ascribe convergence either to weakness of the innervation of the right or left external rectus. If, then, when the lighted candle is carried to the right, the lateral displacement increases, we know that the convergence is due to weakness of the external rectus of that eye. If we had to deal with defective innervation of the right internal rectus, then we would have a crossed diplopia, with an increase in the lateral displacement, when the light is carried to the left side. The same methods are of use when the diplopia is manifest without the prism being put in front of one eye to ascertain which muscle is wanting in action.

Von Graefe made use of an exceedingly delicate test, which consisted of a straight line on which a round spot was drawn. Such a vertical straight line can easily be painted on the wall of a room. If, when the patient is provided with a prism before one eye, the normal image of one eye and the higher or lower one of the other should, if there be no irregularity of the muscles, run into each other so as to form only one straight line. If there be any tendency to diplopia, then the two lines will appear quite distinct, and will not be continuous the one into the other.

One word of caution requires to be given as to the use of prisms. It is this—erroneous results may be obtained unless care is taken to hold the prism in front of the eye at the angle of minimum deviation. The prisms ordinarily supplied with trial cases of lenses may be used, provided we are sure that the line generally drawn on them is perfectly parallel with the base. As a rule, we find it better to have a few prisms carefully ground so as to give accurate results. This is a point which, we fear, is very often overlooked by an incompetent examiner.

The foregoing tests have been the ones chiefly employed from Graefe's time till now, but quite recently Maddox, of Edinburgh, has invented another, which we think is better, in so far as it is more reliable. It consists of a little glass rod, mounted in a suitable frame, which can easily be put into an ordinary trial frame. If a light is looked at through it the light appears as a line of light. Such an apparatus can be put in front of one eye while the other is kept bare. With the eye which is not covered, the patient sees the flame naturally, while with the other he sees it as a line. If the glass rod is placed horizontally before one eye, the line of light appears perpendicular, whilst, if held vertically, it appears horizontal.

Let us suppose that the apparatus is put in front of the right eye. If, then, when both eyes are open, the patient sees the line of light coming down through the flame seen with the left eye, there is no tendency to convergence or divergence. If, on the other hand, the line passes to the right of the flame (homonymous diplopia), there is convergence; if to the left (crossed diplopia), there is divergence. This test is one of the best we have, and we believe it to be thoroughly reliable.

Muscular irregularities are generally described under the name of "muscular insufficiencies," but of recent years a new nomenclature has come into general use, we believe, through the writings of its author, Dr. Stevens, of New York. His papers appeared in the *Archives of Ophthalmology*, and ought to be studied by all who take an interest in this department of eye surgery. So far as we know, the nomenclature is Dr. Stevens' own. When the balance of the ocular muscles is normal—that is, when at rest—they tend to parallelism, he calls the condition *orthophoria*. When the visual axes tend in some other direction, he calls it *heterophoria*. This latter is divided into the following groups:—

Esophoria.—Here there is a tendency of the visual axes inwards; it may be that both are wrongly directed, but, as a rule, only one is so.

Exophoria.—In this condition the axes tend outwards.

Heterophoria.—Here one axis is directed at a higher level than the other. The name does not indicate which axis is the higher, it merely states the fact. When the right axis is the highest it is called right hyperphoria, when the left, left hyperphoria. Sometimes he uses a compound word, as hyperesophoria or hyperexophoria; the first indicates a tendency upwards and inwards, the latter a tendency upwards and outwards.

It is now time that we said something about prisms and about lenses as prisms. From the preceding section the importance of a knowledge of a few of the optical properties of prisms will be apparent. We therefore intend to give an elementary description of their physical and optical properties, and then we shall be in a better position to describe how they may be used in ophthalmology, to correct errors of heterophoria, and to measure directly muscular strength. Fig. 18 represents a prism in cross section. It consists of two surfaces, *A B* and *A C*, inclined to each other at a certain angle, which is called the refracting angle of the prism. It is common to measure this angle in degrees, and to call the prism according to the number of degrees contained in this angle. Thus, if the surfaces are inclined to each other at an angle of 10 degrees the prism is said to be a 10 degree prism ; if at 20, a 20 degree prism, and so on. That this method of numbering prisms is not at all satisfactory is at once apparent from the following considerations:—Let *I H* be a ray of light incident on the surface *A B*. At *H* draw the line *P Y* perpendicular to *A B*, the incident ray will be bent towards this line—let us say that after refraction at the surface *A B* it will have a direction such as *H H'*—the angle *I H P* will be the angle of incidence, and *H H' Y* will be the angle of refraction.

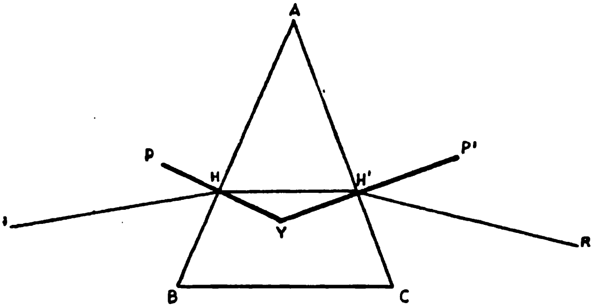

FIG. 18.

From a previous paper we get the formula

$$\sin i = \mu \sin r.$$

At the second surface *A C*, the angle of incidence is *H H' Y*, and as the light passes from a denser into a rarer medium it will be bent away from the perpendicular *P' Y*, in some such direction as *H' R*. Here, for reasons which we do not stop to explain, we write the above formula,

$$\mu \sin i = \sin r.$$

This we do because the light is passing from a denser into a rarer medium.

Even at present the student must see that the deviation produced depends not only on the angle at which the light strikes the prism, but also on the value of μ. Now, that is a quantity which varies appreciably even for the same kind of glass. In some measurements, which we recently made by means of a microscope, we found that different specimens of the same kind of glass gave a considerable percentage of difference of index of refraction. Thus, it will appear that unless we know the index of refraction of the glass of which our prisms are made, as well as the angle at which the two surfaces are inclined to each other, then we do not know the deviation produced. The usual formula for a prism when so placed to a ray of light that the deviation is at a minimum is

$$d = (\mu - 1)\, e,$$

in which d = angle of minimum deviation, μ = index of refraction, and e = angle of prism.

We hope to resume this subject in the June or July number of the *Journal.*

CURRENT TOPICS.

Annual Meeting of Glasgow and West of Scotland Medical Association ("Glasgow Medical Journal").—The Annual Meeting of this Association was held in the Faculty Hall, on Friday, the 30th January last, at five o'clock—the President, Dr. Alexander Napier, of Crosshill, in the chair. The Treasurer's report showed a good balance to the credit of the Association, the advertisements and cash sales of the *Journal* showing an increase over last year. The Editors' report called attention to the circular which had recently been issued, announcing the promises of contributions for the current year, and urging upon the profession in Glasgow and the West of Scotland the necessity of keeping up the membership of the Association. It is essential, in the Editors' opinion, for the prosperity of the Glasgow School as a whole, that the *Journal* should be well supported by graduates and licentiates of Glasgow, and they expressed the hope that gentlemen who have not as yet joined the Association would do so without delay. With increased support, they felt that they could greatly improve the *Journal* in the matter of illustrations. The question of the price of the *Journal* was carefully considered. After a very general expression of opinion, in which it was pointed out, among other things, that the price of the *Journal* was not in excess of that of journals of a similar kind, the meeting unanimously came to the decision that the annual subscription should not be reduced. The following office-bearers for 1893 were then elected:—

President, . . .	DR. DONALD MACPHAIL (Whifflet).
Vice-Presidents, . .	DR. J. CRAWFORD RENTON. DR. G. T. BEATSON.
Editors, ...	DR. JOSEPH COATS. DR. JOHN LINDSAY STEVEN.
Sub-Editor, . . .	DR. JOHN HOWIE CARSLAW.
Treasurer, . . .	DR. T. K. MONRO, 10 Clairmont Gardens.
Secretary, . . .	DR. JOHN LINDSAY STEVEN, 34 Berkeley Terrace, West.

GENERAL BUSINESS COMMITTEE.

MR. HENRY RUTHERFURD.
DR. FRANK SHEARAR (Paisley).
DR. CHARLES WORKMAN.
DR. A. K. CHALMERS.
DR. J. A. WILSON.
DR. ALEXANDER MILLER.
DR. GEORGE MARSHALL.
DR. J. N. MARSHALL (Rothesay).

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—The Society will meet in the Faculty Hall, 242 St. Vincent Street, on Monday, the 13th inst., at eight o'clock. The following specimens will be shown:—*Dr. Eben. Duncan* will show a specimen of an unusually large tumour of the brain, from a case in which extensive trephining had been performed. *Mr. H. E. Clark* will give a clinical account and *Dr. J. Lindsay Steven* will demonstrate and describe the specimen from a case of tumour of the cerebellum with hydrocephalus. *Dr. George Marshall* will show a specimen of a large gall-stone passed per rectum. By *Mr. Maylard*—as a card specimen—a central sarcoma of the lower end of the femur, will be exhibited, &c.

GERMAN MEDICAL CONGRESS.—The Twelfth Congress for Internal Medicine is to be held in Wiesbaden, from the 12th till the 15th April, under the presidency of Dr. Immermann of Basle. There will be discussions on cholera and the traumatic neuroses. A large number of important papers are announced, amongst them, on the toxinproteids for producing and preserving immunity, on the chemistry of the blood, on cancer and its treatment, &c.

HARTMANN'S WOOD WOOL VACCINATION PADS.—Glasgow is at present going through a small epidemic of small-pox and a large epidemic of re-vaccination. If the order of the two epidemics is not reversed, we may thank our sanitary officers, one of whose chief weapons is re-vaccination. For the relief of the suffering these convenient pads, ready for use, with strings and all, may be recommended. They are already largely in use in Glasgow.

REVIEWS.

Clinical Diagnosis: the Bacteriological, Chemical, and Microscopical Evidence of Disease. By DR. RUDOLF V. JAKSCH. Translated from the Third German Edition, and enlarged, by JAMES CAGNEY, M.A., M.D. London: Charles Griffin & Co. 1893.

THE first English edition of this work was briefly noticed in the *Glasgow Medical Journal* for October, 1890. Its increasing popularity, evidenced by the demand for a second edition within three years, would seem to warrant a more extended review.

Its scope is explained by the second clause of its title; it deals with the aids to diagnosis derived from the bacteriological, chemical, and microscopical examination of the blood, the secretions, and the excretions of the body, and does not touch upon auscultation, percussion, and the other methods of examination usually understood by "clinical diagnosis." Yet it is in the best sense clinical—an adaptation of the scientific methods of the laboratory to clinical research. Many of the analyses which Professor v. Jaksch describes could not indeed be carried out in ordinary practice, requiring, as they do, time and apparatus which the practitioner has not at his disposal; but, while these can only find their application in the hospital, there is much in the work from which every one may benefit. No other text-book exists in English which covers exactly the same ground. What that ground is will be best understood from a synopsis of its contents.

The first chapter deals with the blood. After indicating the methods for ascertaining its specific gravity and reaction, changes in its formed element are discussed, and the methods of estimating them described. There is an excellent account of leukæmia, and of the eosinophil cells found in that disease. Anæmia infantum pseudo-leukæmia, a disease first described by v. Jaksch, is noticed, and the blood of chlorosis is distinguished from that of oligocythæmia and pernicious anæmia. The parasites of the blood are then described, with the methods for their detection, the description of the microorganisms of malaria being very clear and complete. Then follows a section devoted to the chemistry of the blood, where the changes produced by poisons are specially described. Processes are given for the detection of urea, uric acid, and sugar. Cholæmia is fully noticed, uræmia perhaps too shortly. A brief mention of changes in the salts concludes the chapter.

The buccal and nasal secretions are treated of in two short chapters. The sputum is next considered. Here there is a very good account of Leyden's spirals, and of their relation to the Charcot-Leyden crystals. Several methods are given for the detection of the tubercle bacillus, to which Dr. Cagney adds those in common use in England. A short section on chemistry is followed by a description of the characters of the sputum in different diseases. Professor v. Jaksch does not consider that the mere presence of the pneumonia-coccus warrants a diagnosis of pneumonia.

The next chapter deals with the gastric juice and vomit. Processes are given for the detection and estimation of pepsin, hydrochloric acid, &c., and their variations in relation to disease are discussed in the light of recent research. The characters of the vomit are next described. The author lays stress upon the absence of free hydrochloric acid in cancer of the stomach. The chapter closes with a full account of the constitution of the vomit in cases of poisoning, and of the analyses for the detection of the poison. Under this head ptomaine-poisoning is treated of at some length.

Considerable space is devoted to the subject of the fæces, the examination of which is too often confined to a perfunctory naked-eye inspection. The chief points in the chapter are the descriptions of the bacilli of cholera, cholera-nostras, and typhoid, and of the animal parasites. The frequent occurrence of hæmatoidin crystals is emphasised. Peptone has been found by the author in five out of seven cases of typhoid, in all cases where the stools contained pus, and inconstantly in hepatic disease. He has never found it in health. The characters of the fæces in intestinal diseases are well described.

The chapter upon the urine is the longest, and perhaps the best, in the book. Quantity, specific gravity, colour, and reaction having been noticed, the microscopical examination is taken up. The diagnostic value of the various forms of epithelium is well stated. The subject of casts is illustrated by admirable figures. Hyaline are distinguished from waxy casts, the former, it is stated, being usually invisible in the unstained condition. There is a somewhat serious misprint on p. 232, where normal saline solution is asserted to contain "75 per cent NaCl." Bacteriuria is succinctly treated. The crystalline deposits are well figured. Those occurring in acid urines are described apart from those of alkaline urines. The methods of estimating albumen, sugar, and urea are very clearly given. The author regards the phenyl-hydrazin test for sugar as the most delicate. He divides glycosuria into physiological and pathological, but does not admit the existence of a physiological albuminuria. Peptonuria, albumosuria, and alkaptonuria are among the other subjects treated of, and the chapter closes with an account of the variations of the urine in disease, and the tests for poisons and for certain drugs occurring in it.

Under "exudations, transudations, and cystic fluids," an excellent description of pus and its micro-organisms occupies the chief place. Under serous exudations the tubercle bacillus is stated not to be present in pleuritic fluid unless there has been breaking-down of tubercular tissue. A brief account of the secretions of the genital organs leads to a very good summary of bacteriological methods. An excellent bibliography ends the work. There is a full index.

From this abstract it will be seen how extensive is the field to which this text-book is devoted. The subjects of which it treats are lucidly expounded, and handled in a thoroughly scientific manner, while due regard is had to clinical requirements. Dr. Cagney's part of the work is very well done. He has supplemented a few passages where the information was somewhat scanty, and added several descriptions of English methods. Nor, in translating German, has he forgotten to write English. The book is well printed, and the illustrations are thoroughly good. The work as a whole contains, in a compact and convenient form, information which could otherwise only be got by a laborious search through journals and monographs. It is one which it will repay every one to possess.

The Diseases and Deformities of the Fœtus: an Attempt towards a System of Ante-Natal Pathology. By J. W. Ballantyne, M.D., F.R.C.P.E., F.R.S.E. Vol. I. Edinburgh: Oliver & Boyd. 1893.

How many volumes are to be expected is not said, and, indeed, the author would appear to have by no means made up his mind on the subject; for, in the preface, having alluded to the contents of the volume before us, he goes on to say:—"In the second volume the remaining idiopathic and some of the transmitted morbid states will be dealt with, and in the third volume the consideration of the diseases proper of the fœtus will be brought to a conclusion. Beyond this point I dare scarcely look, but the remainder of the work will be occupied with the deformities of the fœtus." Of course, a great deal depends on what may be the author's point of view, but, from ours, the deformities constitute a very large remainder indeed—much larger than the whole of the rest of the scope of the book. It is a system of human teratology which is projected; and, to be worthy of the present position of our anatomical knowledge, it will require to be something very different from Ahlfeld's work; otherwise it were better to be contented with a translation of Förster's book, old though that be. Our author says that "he may claim priority for this book, in the sense that it is the first in which the attempt has been made to discuss together, and at any length in one work, both the diseases and the deformities of the fœtus." From this it may be presumed that he has no intention of shirking the mighty task in teratology which lies before him—a mighty task indeed if the anatomical and pathological details are to be properly elaborated. The volume before us consists of 237 pages, exclusive of indices, but it is only at p. 102 that the description of particular diseases of the fœtus commences, and the only diseases considered are general dropsy, general cystic elephantiasis, and general obesity. But even in the description of these the author finds himself already in collision with the gravest of deformities, and he is obliged to refer to forms of monstrosity which are not to be explained till a fourth volume sees the light. Has it never occurred to the author that the same causes which produce such affections as dropsies may be the sources of deformities also? Surely the important part played by dropsical effusions in the production of monstrosities of various kinds makes it unwise to attempt such an arrangement as Dr. Ballantyne has committed himself to. So far as dropsy does not complicate development, there is no evidence that there is anything in it, as it occurs in the fœtus, different from dropsy after birth. It does not appear, from Dr. Ballantyne's volume, that there is. The cases collected under the melodious and brief name of elephantiasis congenita cystica universalis are sixteen—one in the author's own possession, and fifteen collected from other writers. These cases have very little in common. Particularly, in that which the author has himself dissected, the fundamental lesion is not cutaneous, but an early hydrocephalus, which has not only expanded the cranium, but given rise, as it sometimes does, to detached collections of fluid under the skin, but in no way connected with it.

We are sorry to say that we do not consider the historical chapters at all what they ought to have been, and might have been. Such chapters, to be useful, ought to sketch the steps of progress in science, and not present us with lengthy, yet imperfect, lists of very great and very small men's names mixed up together without comment. This is the more to be deprecated, as the writer finds space to air his views on the share taken by Stenson, De Graaf, Bartholin, and Swammerdam in elucidating the nature of generation, without attempting to show that the information, such as it is, has anything to do with his subject. The latter half of the book, whatever its defects, gives a copious account of individual cases and of their maternal history. Undoubtedly, Dr. Ballantyne's province is obstetrics rather than anatomy. We do not doubt that in that department he is an enlightened, efficient, and cultured practitioner. We should have liked his book better if he could have seen his way to discard such old-fashioned horrors of nomenclature as "disomiomphalo-angiopaghi," even though Taruffi be godfather to them, to whom, along with Dareste, of chick-hatching celebrity, and Professor A. R. Simpson and the Fellows of the Obstetrical Society of Edinburgh, the work is dedicated.

Psycho-Therapeutics. By CHARLES LLOYD TUCKEY, M.D. Third Edition, Revised and Enlarged, London: Baillière, Tindall & Cox.

THIS is the third edition of a work so completely revised, and so much enlarged, as to be almost a new book. Dr. Tuckey seems to have bestowed great care in verifying his facts, and in making the work accurate. He carefully avoids the error of over-statement, and the book is written in a sober and critical spirit. The opening chapters deal with the relationship between hypnotic sleep and other cognate states. In this edition of the book a much larger space is devoted than in the earlier ones to the physiology of the subject. Many theories are advanced to explain the hypnotic sleep. Expectant attention, inhibition, and suggestion are the processes which afford an explanation of the commonest phenomena.

Whatever the exact nature of the condition may be, it seems certain, from the evidence of a large number of careful and able investigators that, when the sleep called *hypnotic* is induced, a "second self," which is extremely susceptible to suggestion from without, is produced. Treatment by suggestion, or psycho-therapeutics, consists in the scientific use of the imagination. In this altered state of the imagination the operator gets a command of the bodily functions, and effects are produced which it would be quite impossible to obtain under ordinary circumstances. Many diseases have been treated successfully by the method; as examples of the more important of which may be cited—insomnia, dipsomania, certain forms of insanity, the opium, chloral, or tobacco habit, chronic constipation, and a great many functional painful affections, &c.

The various methods of inducing the hypnotic state are discussed in the work. The author points out that no special qualifications are required for treatment of disease by hypnotic suggestion. The process of hypnotising is subjective and not objective, and with attention to a few practical points moderate success may soon be obtained.

About 75 per cent are hypnotisable. Sex has little influence as a determining factor, and those in good health are, as a rule, as easily hynotised as those of a weakly constitution. It is usually erroneously supposed that the hysterical are alone susceptible to this peculiar influence. Dr. Tuckey and others show that the opposite is nearer the truth. It is also pointed out that hypnotic suggestion is not intended by its advocates to *replace* ordinary methods of treatment, but that it will be found a useful adjunct, especially for those cases that resist the more ordinary therapeutic measures.

The work as a whole is interestingly written, and contains facts which are full of interest to the practical physician as well as to the student of psychology.

The Value of Hypnotism in Chronic Alcoholism. By CHARLES LLOYD TUCKEY, M.D. London: J. & A. Churchill.

THIS booklet or pamphlet embodies the subject of a paper read before the British Medical Association, at the Nottingham meetings of 1892.

Hitherto the treatment of chronic alcoholism has been so difficult a problem to the practical therapeutist that any method which affords a reasonable hope of success in coping with this affection will command the interest and attention of the profession.

Dr. Tuckey's carefully and lucidly written paper would appear to warrant the assumption that in certain selected cases hypnotic suggestion, carried out systematically, may afford a means of cure. He gives an analysis of "thirty-one consecutive cases of chronic alcoholism, treated systematically by hypnotism" during the three years 1889, 1890, and 1891. Dr. Tuckey's experience in treating this condition leads him to certain conclusions regarding the use of hypnotism in chronic alcoholism, the more important of which are as follows:—That hypnotism best succeeds in acquired alcoholism without hereditary predisposition; that inebriates are peculiarly susceptible to suggestion; that casual hypnotism is useless, and that treatment must be systematic. It appears, too, that there must be an earnest desire for reformation on the part of the patient.

Of the 31 cases treated, 20 were men and 11 women. Of this number "three have been cured over two years; still under treatment and doing well, 5; relapsed, but still under treatment, and probably will ultimately be cured, 4; permanently benefited, 4; no effect, 3; relapsed after temporary benefit, 11; one very promising case died after six months abstinence of typhoid fever."

The author also quotes the experience and cases of a number of British, American, and Continental physicians in support of his claims for hypnotism as a valuable therapeutic agent in the treatment of inebriety.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1892-93.

MEETING VI.—13TH JANUARY, 1893.

PATHOLOGICAL SECTION.

The President, DR. JOSEPH COATS, *in the Chair*.

I.—SPECIMENS OF EPITHELIOMA OF GLANS PENIS.

BY DR. JOSEPH COATS.

Dr. Coats showed as fresh specimens two examples of the above-named tumour which had been sent to him. They could be seen, he said, to have the general warty surface, and on looking at the incision which had been made into one of them, it was also evident that the growth had penetrated inwards to a considerable extent. One was interesting in view of the fact that it was from a case of prolonged phimosis; on slitting up the prepuce, a wart had been revealed which had grown rapidly.

II.—SPECIMEN OF MAMMARY CANCER FROM MALE PATIENT.

BY DR. JOSEPH COATS.

Dr. Coats showed this also as a fresh specimen. It might be seen to have the typical appearance of scirrhus—concave surface on section, with cartilaginous look. It was small as a carcinoma, but not so small considering that it was from the (male) mammilla.

III.—MELANOTIC TUMOUR OF THE SKIN OF THE HEEL.

BY DR. JOHN BARLOW AND DR. CHARLES WORKMAN.

Clinical History (Dr. Barlow).—R. M'D., aged 48 years, who worked as a furnace-man, was admitted into the surgical wards of the Glasgow Royal Infirmary on the 26th September, 1892. He complained of a sore upon the outer aspect of the right heel, of three months' duration. No cause could be assigned for it by the patient.

Examination showed a brownish or purplish coloured spot, about the diameter of a shilling. The epidermis was apparently absent over the spot, and at the margins the horny layer of the epidermis appeared as if cleanly cut or punched out. The base of the patch was depressed.

Poultices had been applied before admission, possibly with the object of hastening the separation of the discoloured mass. No enlargement of popliteal or femoral glands could be made out.

The case was regarded by the surgeon in charge as one of gangrene, resembling in appearance and slow course the gangrene associated with diabetes. Poultices and moist antiseptic applications were applied to hasten the separation of the "slough," the cleanly cut epidermis at the margins being regarded as the line of demarcation.

Daily examination of the urine gave no indication of the presence of sugar. Examination of the arterial walls revealed no sensible departure from the healthy type. The applications were continued till the beginning of November, when the patient came under my notice officially, though I had the case under observation from the beginning of October. Contrasting the appearance in November with that present upon admission, it was evident that the coloured patch had increased slightly in size; there were no signs of separation. Examination showed that it was very sensitive and vascular.

On 9th November I removed the mass along with some of the surrounding healthy skin nearly to the level of the bone, and the wound was dressed so as to favour healing by granulation.

On 1st December, the man was made an out-door patient, the ulcer being almost healed, and on the 12th cicatrisation was completed, and the man felt quite well. The absorbent glands were examined and they were not enlarged.

Regarding the nature of the tumour, I may add that if it is to be regarded as a malignant tumour, the clinical history seems to support the idea that it is a melanotic sarcoma.

Pathological Report (Dr. Workman).—I received the tumour mass from Dr. Barlow, and made sections from a portion of it (including both the black mass and the apparently healthy skin surrounding it) by freezing. I examined the sections unstained and stained with hæmatoxyline, and also with picro-lithium-carmine.

The dark part of the tumour is found to consist chiefly of epithelial-like cells, in a small amount of connective tissue stroma; these cells contain a large amount of brown pigment, which has given the dark colour to the specimen. The epidermal layer of the skin seems to be entirely absent from this portion of the tumour, and these cells would seem to have taken origin from the glandular epithelium in the neighbourhood. The skin around this portion, which to the naked eye appeared healthy, is found also to contain similar pigmented cells arranged in columns in the papillæ, and also irregularly at the bases of the papillæ. The microscopic structure and arrangement is not at all that of a sarcoma, but the tumour is evidently a pigmented carcinoma which was slowly spreading into the healthy skin, and had taken origin from the glandular epithelium of the skin.

Various illustrative sections were shown under the microscope.

Mr. Clark had seen the case in consultation, and had found it very interesting as a clinical specimen. He had considered the condition as malignant, but had not been prepared to suppose it one of melanotic *sarcoma.* It had appeared to him to have ulcerated before any tumour had formed, and in melanotic sarcoma one expected a tumour to form first and the skin to give way subsequently. As to the treatment, his opinion had been that very free excision, such as was mentioned in the report, was called for.

Supposing the specimen to be one of pigmented epithelioma, Mr. Clark proceeded to discuss the question of the occurrence of the pigment which he held to be a very interesting point. He had seen cases of pigmented sarcoma in the eye, and remembered one in which the tumour had been removed and recurred several times (on one occasion being shown by Dr. Johnstone Macfie), and in which the total duration was about twenty-five years. He had seen other instances of melanotic sarcoma, not connected with the eye, and of a highly malignant character. He would have expected to find the present tumour much more distinctly malignant, seeing that it was an epithelioma or malignant tumour which had become pigmented, and yet which had occurred in a place where pigment was not so plentiful that any tumour forming in it became pigmented as an incidental circumstance.

Dr. Coats had no doubt, from the microscopic appearances, that the tumour was cancerous, and that it was to be classified as pigmented cancer. The only point upon which he would differ from Dr. Workman was as to the character of the cancer. He did not think that it was a case of glandular cancer, and the fact that processes could be seen extending downwards seemed to indicate that the growth had been from the epidermis. Another point in favour of this view was that there was no pigment in the glandular structures in question, while pigment occurred normally in the Malpighian layer. Thus he would agree with Mr. Clark in naming the specimen one of melanotic epithelioma.

Dr. Coats did not know why some melanotic tumours should be so malignant. He remembered one which would come into the second group mentioned by Mr. Clark; it was a melanotic sarcoma of the arm, and secondary tumours formed in nearly every part of the body. Such melanotic sarcomata were well known to be very malignant, and he thought that melanotic carcinomata resembled the sarcomata in this respect.

Dr. Rutherfurd reminded Dr. Coats of a case of melanotic carcinoma which they had examined together; the primary tumour had been in the thigh, and within a comparatively short time secondary growths had formed in the liver and in the glands of the neck.

Mr. Clark added that, if the present case were one of melanotic epithelioma, they had probably not seen the last of it.

Dr. Coats concurred.

Dr. Workman, in his reply, likewise concurred in this view, pointing out that the history dated back only to three months prior to admission on 26th September. The tumour had been removed comparatively early in the case, and the wisdom of the operative procedure adopted had been shown by the examination of the sections, as described in his report.

As to the presence of the pigment, there was some difficulty. Dr. Coats had said that the pigment rendered it more probable that the growth was of epidermal origin. On the other hand, the distribution of the cells, as they extended beyond the tumour proper into the healthy tissue, did not look exactly like a disease spreading from the epidermis. Dr. Thin, if he remembered rightly, in his book on epithelioma and rodent ulcer, spoke of the differences in the character of such extensions; rodent ulcer he described as eating out the tissues under the epidermis somewhat in the manner seen here. If this growth had been epidermal, he would have expected it to have spread regularly, and not to have caused the pit which was present.

Dr. Coats asked if the nuclei had been difficult to stain; they were imperfectly stained in the parts he had seen under the microscope.

Dr. Workman replied that some of them had been difficult to stain, but the majority were not so. He had chosen slightly stained sections intentionally in order that the structure might not be obscured.

IV.—CYSTIC GLIOMA OF THE CEREBELLUM, WITH ŒDEMA OF THE VENTRICLES.

By Dr. James Parker.

Dr. Parker's paper is published as an original article at p. 181.

Dr. Workman asked if Dr. Parker had ever made a similar experiment on animals. He thought that the danger was that he would be very liable to produce instantaneous death from touching the medulla oblongata. Effusion into the ventricles, such as had been described in the report, was known to be very common in cases of tubercular disease of the cerebellum, and there they had commonly pressure on the veins—he believed the veins of Galen. Enormous distension of the ventricles might thus be produced, as had been illustrated in a recent case in the Glasgow Royal Infirmary.

Mr. Clark said that the case just quoted by Dr. Workman had been under his care. In it, it had been obvious that the hydrocephalus had been due to an impediment to the escape of the normal serous fluid of the ventricles. Hilton's theory of the mechanism of chronic hydrocephalus was that there was some occlusion of the foramen of Majendie—either inflammatory or mechanical, the latter by pressure from a tumour—the ventricular fluid being thus prevented from escaping into the subarachnoid space.

Dr. Workman said that that would not account for a sudden distension of the ventricles.

Mr. Clark replied that in the Royal Infirmary case the distension had not been sudden. Dr. Parker had been quite right in pointing out that in his case it was not the veins of Galen, but the straight sinus which had been subjected to pressure; the result, however, to the ventricles would be the same. The case, altogether, was a very interesting one, but he could not approve of the proposed method of puncture, which reminded him of what was called "pithing" in physiological laboratories. He did not see that any harm could have come from trephining the cerebellar fossa of the skull, and he would say that if it was possible to make the diagnosis it would also have been possible to trephine. The absence of any signs of inco-ordination was very striking, but these were often absent with cerebellar abscess; and, indeed, the cerebellum was such an oddity that it was difficult to know what to expect from it. In his own case, above quoted, there had been no definite cerebellar signs. Mr. Clark proceeded to discuss the question of the accumulation of fluid in the subarachnoid space, upon which Dr. Parker had dwelt so strongly. He asked as to any accumulation around the upper part of the spinal cord, especially in relation to the suggested puncture.

Dr. Coats, interposing, said that it was quite common, when there was distension of the lateral ventricles, to have a welling up of fluid from the subarachnoid space when one was taking out the brain, but this fluid came from the ventricles. When the lateral ventricles were distended, there was also distension of third and fourth, and the wall of the fourth was very apt to give way, and then one got a spout of fluid. He presumed that that was the explanation of the "jet" of fluid which Dr. Parker had described, the ventricles having been distended in this case. His (Dr. Coats's) experience was that subarachnoid accumulation and effusion into the ventricles did not go together; indeed, the two seemed almost incompatible with one another, the absence of subarachnoid fluid being a recognised sign of distension of the ventricles. He would not expect to get fluid in the subarachnoid space unless there were atrophy of the brain.

Dr. Workman and *Mr. Clark* spoke of the escape of fluid from the ventricles when the *infundibulum* was cut across in the removal of the brain, provided the cut involved the *tuber cinereum*.

Dr. Coats, in reply to a question from Dr. Parker as to the suddenness of the death, said that on that point he was thrown back on a case which he had seen as pathologist to the Royal Infirmary. The patient, a baker, had been suddenly seized with cerebral symptoms and died. It had been only at the *post-mortem* that the cause of death had become apparent in an extraordinary distension of the ventricles—an acute hydrocephalus, in the etymological sense of the word. In searching for the cause of the hydrocephalus they had found nothing in the way of tubercular meningitis, and the explanation had seemed to be a small cyst bigger than a choroidal cyst, but not bigger than a marble, immediately in contact with the veins of Galen. Pressure seemed thus to have been produced, and he thought there might have been something similar in Dr. Parker's case, the pressure on the straight sinus giving rise to ventricular distension, and thus causing death. He could not see how pressure on the straight sinus could have produced subarachnoid accumulation.

Mr. Maylard agreed with other members who had spoken in disapproval of the puncture proposed by Dr. Parker.

Dr. R. M. Buchanan, who had been present when the puncture was made upon the dead subject, said that although it seemed to have been easily enough performed, he could not approve of it, especially as one could not be sure of doing any good. He considered that in Dr. Parker's case there had probably been no fluid except in the ventricles and in the cyst, and he referred to three cases of acute hydrocephalus (arising from various causes) in young adults, in which he had himself had a similar experience in connection with the removal of the brains. The lateral ventricles in those cases had been enormously distended, some tear had allowed of escape from the ventricles, and the fluid had suddenly welled up from the sides of the medulla oblongata, but had not really been subarachnoid.

V.—SPECIMEN FROM CASE OF SPINAL TUBERCULOSIS ASSOCIATED WITH ABSCESS.

By Dr. R. C. Brodie.

Dr. Brodie's paper appears as an original article at p. 172.

Dr. Coats said that, personally, he was much indebted to Dr. Brodie for this very fine specimen.

Dr. Middleton quoted other two cases which had occurred in the Royal Hospital for Sick Children, of death from spinal abscess. One had been reported by Dr. Samson Gemmell, and the other by himself.

Mr. Maylard referred to a case in which he had performed tracheotomy for pressure on the trachea by a spinal abscess, and where death ensued subsequently from ulceration of the cannula through the trachea into the innominate artery. (See *Annals of Surgery,* vol. ix, p. 192.)

VI.—SPECIMENS ILLUSTRATIVE OF SPINAL TUBERCULOSIS AND ITS HEALING.

BY DR. JOSEPH COATS.

The specimens shown by Dr. Coats were from the Western Infirmary Museum, being those numbered 27, 28 and 29 of Series I and 53 of Series I A in the Museum Catalogue.

VII.—SPECIMEN OF ANENCEPHALUS.

BY DR. R. C. BRODIE.

Dr. Brodie showed this specimen, and gave the following account of it:—

Fœtus is about the eighth month. Both father and mother are healthy. Three previous children were healthy. No history of syphilis, or anything in the nature of "impression" during the pregnancy. The child weighs 2 lb. 1 oz., and measures 13¾ inches. The uterus was much distended and the child lay transversely. The head could not be felt through the abdominal walls. The quantity of liquor amnii was very large. The labour ended as a cranial presentation. On birth the child's arms and legs both jerked several times, the muscles affected being the flexors. Flexion of the fingers was very strong. No respirations occurred. The heart beat for one hour and a quarter after birth, the pulse being strong, and its rate varying from 72 to 12 per minute. The temperature was 97·4° F.

Along with Dr. Brodie's specimen there was also exhibited a case of anencephalus in section, illustrating the internal appearances in this abnormality. This latter case was published by Dr. Coats in the *Glasgow Medical Journal*, September, 1890.

VIII.—BRAIN SHOWING THE TRACK WITHIN THE CRANIUM OF A REVOLVER-BULLET FIRED INTO THE ROOF OF THE MOUTH.

BY DR. T. K. MONRO.

The bullet entered the middle of the hard palate, passing upwards and outwards to pierce the cranial base at the outer anterior margin of the left cribriform plate, where small fragments of lead adhered. It made a roughly circular aperture in the *dura mater*, and continued upwards through the substance of the frontal lobe to its upper surface. Here its course was deflected by the inner table of the skull, and it passed backwards and slightly inwards, ploughing up a considerable furrow in the cortex, until it reached the mesial surface of the left hemisphere, where it rested at a place corresponding, on the convexity, to the anterior border of the ascending frontal convolution. The patient, who was in an advanced stage of phthisis, was perfectly conscious when admitted to the Victoria Infirmary, but died a day or two after the accident, probably owing to the hæmorrhage which took place into the arachnoid space on the left side.

Some discussion having arisen as to the cause of death, *Mr. Maylard*, who had seen the case during life, stated that he considered that there had probably been septic extension along the track of the bullet, the point at which it entered having been favourable to the introduction of sepsis. In another somewhat similar case which he had had, there had been softening (from sepsis) along the track. In this latter case they had trephined, but did not find the bullet at the operation, it also having been deflected.

Dr. Fleming referred to a case he had had at the Royal Infirmary. The patient had had a bullet enter the cheek some years before, and recovered at the time; certain symptoms having developed, he had been again led to seek advice, and Dr. Fleming had found a tender spot on the skull exactly opposite the point of entrance, but permission to operate had been refused.

IX.—CARD SPECIMENS.

A. By Dr. J. H. Nicoll.

"*Mammary Tumour with Intracystic Growths.*—The tumour belongs to that group of mammary growths which includes adenofibromata, adenomyxomata, adenosarcomata, and the rarer pure adenomata, the grouping of these growths being followed by most of the recent writers on the breast on account of the difficulty of clearly drawing the dividing line between any two of them. The specimen shows, in its intercystic stroma, a tissue which has the structure for the most part of fibrous tissue of low development, but, in parts, suggests an approach to a more purely cellular type like that of spindle-celled sarcoma.

"The tumour weighed 3 lb. 6 oz. On section into halves (one half being the specimen), many cysts, varying in size from that of a pea to that of a walnut, and containing "cauliflower," intracystic growths are seen. Microscopically these growths are seen to present the same structure as the stroma. Both cyst-walls and intracystic growths are covered by a layer of columnar or cubical cells.

"The tumour had been growing for over two years, was painless, and adherent only to the skin, which had sloughed at two points. It was firm, lobulated, and fluctuant or elastic at several points."

B. BY DR. WORKMAN.

"1. *Malignant Stricture of the Colon.*—The body examined was that of a labourer, aged 63 years. The colon, about the junction of the ascending with the transverse portion, was bound down by adhesions, and the omentum was here adherent to the mesentery; at this part there were a number of enlarged lymphatic glands. Sections show great thickening of the mucous layer of the intestine. The tubular glands are enlarged, and form cyst-like dilatations, which are lined with columnar epithelium. (No. 544.)

"2. *Lipoma of the Shoulder.*—The tumour was removed by Dr. Fleming from a carter, aged 25 years, on the 31st March, 1892. The specimen has been preserved since then in a solution of common salt, with a little carbolic acid. (Tumour Book, No. 125.)"

C. BY DR. R. M. BUCHANAN.

"1. *Cancer of Testicle.*—History of swelling of right testicle for twelve months. There was "a hydrocele of the cord," resulting from a bruise at the age of 17. The hydrocele enlarged with the tumour. There was *pain* latterly for six weeks—chiefly in the hydrocele. The patient is aged 51.

"2. *Large Cyst of the Vermiform Appendage, with Sero-mucous Contents.*—The cyst is formed from the distal extremity of the appendage. (It is stuffed with cotton wool.)

"The patient was aware of the presence of the swelling for a period of five years, but it gave no inconvenience except from its bulk. He died of phthisis pulmonalis.

"3. *Cancer of the Head of the Pancreas,* causing incomplete obstruction of the pancreatic and common bile-ducts.

"A piece of whalebone is passed through the cystic duct and common bile-duct into the duodenum. The common bile-duct is dilated.

"The patient died from aneurysm of the thoracic aorta rupturing into the left bronchus."

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

NERVOUS DISEASES AND INSANITY.

BY DR. R. S. STEWART.

Modifications in the Mental State of the Insane attacked by Cholera. By Camuset (*Annales Médico-Psychologiques*, November-December, 1892).—The following conclusions are drawn from the observations of 60 cases which occurred during the recent epidemic in the Asylum of Bonneval:—

Cholera, as a rule, is unaccompanied by psychical symptoms. Occasionally a fugitive febrile delirium has been noted when the patient passed into a typhoid state, but none of the cases here recorded presented this symptom. In such of the cases as did not present delusions, the intelligence remained such as it was in the ordinary condition. The influence of cholera on the different forms of insanity is analogous to that of other grave intercurrent acute maladies, but it presents special peculiarities. Thus the choleraic attack causes the temporary disappearance of all maniacal states, whatever their nature or duration, but after recovery the mania is re-established. Cholera also modifies melancholic conditions in the direction of amelioration, causes the disappearance of the vague, non-systematised delusions of mania and melancholia, but has no action on systematised delusions, or on the deluded ideas or hallucinations of the insanity of persecution. Only one general paralytic was attacked, and with no resultant modification of the mental state. Several times it was observed that chronic maniacs, who were believed to be completely demented, showed a surprising degree of intelligence, so much so as to suggest that in their case the cerebral troubles were of the functional order, and due to some modification of the circulation.

The Use of Hypnotism among the Insane. By Robertson (*Journal of Mental Science*, January, 1893).—As a direct therapeutical agent, hypnotism may succeed in intractable cases of insomnia where drugs have failed; and the sleep induced by this means, being more closely allied to healthy sleep, must be of great service where brain nutrition is already bad, and the additional effect of depressing drugs is undesirable. It may prevent an outburst of excitement from passing into mania in highly unstable brains, and it has dispelled fleeting delusional states and the minor psychoses. Indirectly its use has been found beneficial, as, for instance, in overcoming the morbid resistance of patients for their own benefit, and as a substitute for restraint—mechanical, chemical, or physical—in cases of excitement and violence. Its extensive use in an asylum may be attended with undesirable results, tending possibly to increase and strengthen delusions about hypnotism and unseen agencies.

The Influence of Intestinal Disinfection in some Forms of Acute Insanity. By Macpherson (*Journal of Mental Science*, January, 1893).—This article refers to the use of naphthalin in thirty cases of recent insanity, chiefly cases of melancholia. In no case was there any apparent interference with the functions of digestion, assimilation, or excretion. The bodily weight steadily increased, and the usual tendency to pigmentation of the skin, so common in melancholia, was checked, as also the dry character of the skin. One of the most striking results was the promotion of sleep of a normal kind even in cases where hypnotics had failed. Its influence on the mental state was to modify and abate the distressing and more violent symptoms, and to hasten on a condition similar to commencing convalescence; but the purely psychical disorder of the brain was found to be in no way affected.

Lunacy in Scotland.—The Thirty-fourth Report of the Commissioners in lunacy indicates that, during the year 1891, the number of lunatics in Scotland has increased by 204, the total number at the end of the year being 12,799. Year after year this increase, which is not, in the opinion of the Commissioners, to be attributed to an increased tendency to insanity in the community, or to any one single cause, goes on, and the necessary consequence is that the accommodation has to be correspondingly augmented. To some extent, the boarding out system has afforded a means of providing for this, but this has seemingly about reached its limit, and the enlargement of existing, and erection of new asylums, has, in many districts, become necessary. It is pleasing to find that wherever this is being done the provision of properly equipped hospital departments for the curative treatment of mental disorders occupies a very prominent place.

Two Cases of Brain Tumour.—By Mosher. (*American Journal of Insanity*, October, 1892.)—In the first case the primary symptoms were those of gradual mental enfeeblement, and this was followed by helplessness with varying degrees of paralysis of the limbs and sphincters with increasing stupor, and death was preceded by coma lasting 2 days. A nodular growth, sarcomatous in nature, and springing from the pia, at the base, was found, displacing backward, without directly involving, the left frontal lobe, and laying open the anterior horn of the lateral ventricle.

The second case was characterised by dimness of vision, culminating shortly in complete blindness, attacks of giddiness, and convulsions affecting the right side, mental stupor and resistiveness, somnolence and increasing coma. The tumour occupied the site of the pituitary body, which it appeared to replace, was nodular, and was composed of cellular material, with radiating bands of tough fibrous tissue. By its pressure, it had caused destruction of the optic chiasma, and of the inferior surface of the frontal lobes, and had exerted considerable pressure on the remainder of the brain.

SURGERY.

By HENRY RUTHERFURD, M.B.

Keloid.—In the current number of the *Archives of Surgery*, Mr. Hutchinson details a number of cases illustrative of this disease, and analyses our conception of its nature.

"Now that, by general usage, the term keloid is restricted to the scar form —the keloid of Alibert—and is never applied to morphœa, we may, I think, suitably discard the terms 'true' and 'false' as having no signification, and with them also, so far as my own belief goes, the term 'spontaneous.'

"Defining keloid to be a fibroid hypertrophy of scar tissue, which is aggressive and, in a feebler sense, infective, the following propositions may, I think, be ventured respecting it:—

"1. Although it is denied that keloid ever begins in uninjured skin, yet it is not to be doubted that it may originate in very small scars, and spread far beyond their limits.

"2. The cases which begin in small and scarcely recognised scars, although usually attended by very slow growth, show remarkable persistence.

"3. There is a natural law of decline to final disappearance which attaches to all keloid, although the disease may, in exceptional cases, persist for twenty or thirty years.

"4. It is remarkable that keloid growths, although infective in continuity, and thus serpiginous, show little or no power of reproducing themselves in distant parts, unless scar tissues be there present.

"5. If, however, old scars be present on distant parts, then the development of keloid in a new one may become the means of infecting some of the old ones, and causing them to produce similar growths.

"6. The important law just stated makes it probable that in all cases of keloid infective germinal matter is shed into the blood, but that it cannot in healthy skin find a suitable home for development (*cf.* case in which scars left by cupping only took on the character when keloid had developed at site of a scald; also case in which scars of small-pox became secondarily affected in similar manner).

"7. Although keloid is possibly a near ally of sarcoma, and although some of its modes of growth resemble those of a malignant disease, yet it never takes on malignant action—*i. e.*, never ulcerates or fungates, or causes gland infection. When once keloid has softened and undergone resolution, it never returns.

"8. Those cases in which keloid forms immediately after the injury and develops rapidly, are very hopeful as regards speedy involution. So, also, are those which occur in young persons, and those which are unusually extensive.

"9. However long a keloid patch may have existed, there is still hope that it may go away."—(*Archives of Surgery*, January, 1893.)

Congenital Retroperitoneal Cyst (Pancreatic?)—Richardson of Boston reports a case successfully operated on by him. At the age of 13 months, the otherwise healthy child—a boy—"presented a fluctuating tumour filling the whole abdomen, and apparently attached to or arising from the left." Median abdominal incision exposed a thin walled cyst containing 7 lb. of slightly opaque fluid. It seems to have been removed by enucleation.

Before operation the prevailing opinion was in favour of hydronephrosis. Some pancreatic tissue, thinned out, was found in the wall. The operator, however, was of opinion that this was accidental and due to contiguity merely, that had it developed in the gland—from the duct at all events—it would not have been so easily enucleable.—(*Trans. American Surg. Assoc.*, 1892.)

Operative Treatment of Exophthalmic Goitre.—At a meeting of Berlin surgeons in December, 1892, Determayer showed a woman, æt. 37, who had been treated by operation for well-marked Basedow's disease. She had enjoyed good health till attacked by influenza in 1890. In the course of this illness, the neck became thicker and the eyes more prominent. Other symptoms set in about the same time—paroxysms of dyspnœa and palpitation, headache, insomnia, vertigo, anorexia, severe diarrhœa, irregularity of the menses, and tremor and cramps of the hands and fingers. After the commencement of 1892, the symptoms were much aggravated, and patient emaciated greatly. In April, the thyroid was increased by one-third of its volume, and in the same month Rotter removed the right (larger) half of the gland. Decided signs of amendment were noticed in a week; the tremors, spasms, headache, diarrhœa, and palpitation were gone. In three weeks more there was great improvement in the general condition, but the exophthalmos and the goitre still remained, as at first after the operation. It is only since the end of August that the left lobe of the thyroid has been restored to its normal size, while the prominence of the eyeballs has been steadily getting less.

Determayer believes that the direct connection between the operation and the improvement cannot be questioned, and he remarks that the case points to the goitre as the essential element in the disease, and the cause of the symptoms.

Thirty-seven patients have hitherto been operated on for this disease. In 4 of these cases, operations were performed on the nose; in the remainder, the thyroid itself was dealt with. In 3 of these 33 cases, the arteries supplying the gland were ligatured; in the others, the gland was resected. One case terminated fatally; 3 others were without result; while in 26, considerable improvement or even complete cure took place. In view of the trifling influence that drugs possess over this malady, it must be admitted that surgical treatment ought to have the preference.

Jul. Wolff has removed half the thyroid in 5 cases of exophthalmic goitre. One patient died on the operating table through suffocation with mucus. In 3 cases, the results were favourable. The patients were treated 6, 5, and 4 years ago respectively. All the symptoms, including the thyroid enlargement, receded. The third patient, however, returned after two years with a severe relapse. The fourth case was treated last summer, and promises well. The unfavourable judgment which has of late been pronounced upon the operative treatment of Basedow's disease, from the point of view of neuropathology, would appear not to be justified. These 4 patients were, on admission, in a miserable state with tracheal stenosis, and when they were dismissed they were in a state of complete comfort.—(*Deutsche Med.-Zeit.*, 26th December, 1892.)—T. K. M.

Fracture of Vertebral Column by Muscular Effort: its Existence long overlooked.—An unusual case of this kind is recorded by Verneuil and Forestier. The patient was a Protestant clergyman, æt. 49, of excellent family and personal history. While walking on ice he slipped, but, by a violent effort, managed to keep his feet, though he immediately experienced a severe pain in the lumbar region. His medical attendant thought he had simply strained the part, and recommended rest in bed. He rose after three days, and as he felt pretty well on the fourth, began to break ice with a pick, when at once the severe pain returned. The same symptom reappeared four months later, in consequence of an attempt to drive a stake with a heavy mallet. The first attack had been in February, 1891. In August following patient suffered from dry pleurisy on the right side for a fortnight. One month later, for the first time, and without known cause, he began to have girdle pains at the level of the epigastrium and umbilicus. These recurred several times in the course of the ensuing winter, and were considered by various medical men to have a rheumatic origin.

When patient was first seen by Forestier in June, 1892, a very slight but distinct projection of the spine of the ninth dorsal vertebra was observable. Pressure on this caused no pain, but pain was felt along the course of the intercostal nerves. The girdle pains had latterly become almost continuous, and were at their worst when patient was seated, or above all, when he was lying down, so that he was terribly harassed by want of sleep at night. After studying the case, Verneuil agreed with Forestier that the prominence of the spine was due to the giving way of the body of one vertebra, and that the girdle pains were due to neuritis from the consequent compression and irritation of two intercostal pairs. The authors, while taking this view of the case, fully recognise the unwonted character of the mechanism of the fracture, and the unusually late appearance of the spinal curvature and pains.—(*Bulletin de l'Acad. de Méd.*, 27th September, 1892.)—T. K. M.

GYNÆCOLOGY AND OBSTETRICS.

By E. H. LAWRENCE OLIPHANT, M.D.

Pelvic Version.—*The New York Medical Journal*, 31st December, 1892, reports a paper on this subject read by Dr. M'Gillicuddy before the New York State Medical Association. In spontaneous pelvic version, the writer said, the breech presented, while the head and trunk passed towards the fundus of the uterus. Pelvic version was simply the artificial imitation of spontaneous pelvic evolution, and it was especially indicated in transverse presentations. It was most easily performed by the fingers inserted into the child's groin or over the crest of the ilium, by which means the breech was drawn down into the pelvis. This was aided by external pressure on the head and breech, thus approximating the two poles of the fœtus. In cases of transverse presentation, its advantages over podalic version might be summed up as follows:—1. It is a much simpler operation, as it simply converts the case into an ordinary breech presentation. 2. It necessitates the introduction into the uterus of the fingers only, whereas podalic version requires the introduction of the whole hand and arm. 3. It is only necessary to move the child sufficiently to draw down the breech, while in most cases of podalic version the body of the child must be made to rotate around the whole cavity of the uterus. 4. There is, consequently, much less shock, and there is less danger of rupture of the uterus. It is also especially useful in those unfavourable cases in which the arm presents, with the shoulder pressed well into the pelvis, where the liquor amnii has been discharged, and the uterus is retracted on the child's body. Here podalic version is usually out of the question.

Chloasma Uterinum.—Dr. A. A. Young contributes a paper on this subject to the *New York Medical Journal*, 24th December, 1892. Excluding cases of pigmentation due to mechanical irritation or organic disease, such as consumption, he maintains that these so-called "liver spots" are largely due to or associated with uterine enlargement. Concerning this last named condition, which might be termed uterine chloasma, he says it is the most common form, and most amenable to treatment. It is rare to see it begin and develop before puberty or after the menopause. Its existence is dependent upon the abnormal activity of the generative organs. From observation, he was led to believe that excessive venery was one of the more common sources of irritation that produced the deposit of pigment. In all those cases in which he had been permitted to make an examination, he had found a flabby and enlarged uterus, the cavity of which, including the cervix, measured from 3½ to 5 inches. The uterine walls were more or less thickened, and both the os internum and externum somewhat dilated; in short, the uterus assumed the condition and appearance of subinvolution, as is occasionally seen after confinement. But this condition existed not alone in females who had been pregnant, but in women, as well, where conception had never taken place. Uterine chloasma runs an indefinite course—it may run on to old age or fade away at the menopause. Dr. Young's treatment consists in causing continued desquamation of the epidermis over the discoloured patches with corrosive sublimate solution of 5 grains to the ounce, while attention is also directed to the uterus. He obtains uterine contraction by intra-uterine medication, usually in the form of iodoform pencil, or by galvanism.

Dermoid Cyst Containing Gas.—Dr. Alfred J. Smith published a report of series of abdominal sections in the *Dublin Journal of the Medical Sciences*, February, 1893. Case No. 3 presents points of interest. The patient, a young girl aged 22, had enjoyed good health up to twelve months before admission, when one day, while lifting a gallon of water from a well, she was suddenly seized by pain, in the lower part of the abdomen, of so intense a character that it was necessary to carry her to bed in a fainting condition. Inflammatory symptoms set in, accompanied by rigors and rise of temperature. The patient's condition was, for a time, critical; however, a discharge of pus by the rectum gave considerable relief, and it was hoped the case would clear up. At every motion of the bowels pus would come away. This continued up to three months before admission, when the discharge suddenly ceased; and, with this cessation, hectic symptoms of a marked character set in, and the patient's condition became pitiable. On admission, she presented all the symptoms of chronic septic poisoning, even to the well-marked chloasma marks on the forehead and nose, the evening temperature reaching 103·5° F. On examination, under ether, the uterus was felt pushed over to the left side of the pelvis, and was tolerably movable, and an ill-defined elastic mass was felt to its right side of so indefinite a character that there was, at first, considerable difficulty in making a diagnosis. Dr. Smith thought it might be some curious intestinal displacement. This elastic mass, when pushed up out of the pelvis, gave a clear note on percussion. This added to the confusion. Still, there was no doubt of the presence of a tumour, because the impulse could be got between the hands bimanually. The tumour, at the time of the operation, was found between the layers of the broad ligament, and was easily shelled out, but, as might have been expected from the history, a fæcal fistula resulted. This gave rise to much trouble, which, in the end, was overcome by irrigation and drainage of the rectum. The case ultimately did well, and the sinus was closed.

Induction of Premature Labour in Heart Disease with Deficient Compensation.—Herr Roesger read a paper on this subject before the Gynæk. Gesellsch. at Leipsig in October, 1892 (reported in the *Cent. für Gynæcologie*, 7th January, 1893).—He recorded a case of a multipara who had had cellulitis after her last confinement ten years before. She had suffered from acute rhuematism in her joints eight years previously, followed by cardiac disease with inefficient compensation on several occasions. She was further troubled by biliary colic leading to collapse from heart failure during the passage of gall-stones. When four months pregnant her cardiac symptoms became much aggravated—dyspnœa, cyanosis, and œdema. By the eighth month there was general anasarca and ascites, with bronchitic râles and bloody expectoration. There was a mitral systolic murmur, and the left side of the heart was greatly hypertrophied. The liver projected two finger-breadths below the ribs, and was tender on pressure; the gall-bladder could not be clearly felt. Labour was induced by dilatation of the cervix and plugging, and was at first slow in progress, and lasted three days. The child was born alive, but was slightly icteric. The jaundice became deeper, and after some convulsions, but without fever, the child died on the sixth day. Sectio was not permitted. In the mother the œdema had very markedly diminished on the third day, while the sputum had totally disappeared. Temperature subnormal; pulse strong and regular. Later she complained of pain in the hepatic region of a severe character—but not so intense as she had previously suffered during the passage of gall-stones—with some feverishness. By the sixth day the temperature was again normal, but the patient still complained of severe pain, and the gall-bladder could be felt of the size of a hen's egg, and very tender; but there was no jaundice, and the stools were well coloured throughout. Two days later all symptoms had disappeared, and as no gall-stone was found, the diagnosis between gall-stone and stenosis of the duct was not established. On the general question, Herr Roesger gave it as his opinion that the condition must be such as absolutely to imperil the mother's life before one can decide on inducing premature labour, as it gives, at best, a doubtful prognosis for mother and child in such cases. Expectant treatment is the one chiefly to be adopted, though it must be admitted that the severest and most threatening symptoms are relieved by delivery, and sometimes even from the time of the breaking of the waters. Among the risks of induced labour are all the risks incidental to that operation in other conditions, such as narrow pelvis—namely, prolonged labour with septic infection, atony of the *post-partum* uterus; and, in addition, the difficulties in the way of operative interference from the dangers of chloroform in the patient's cyanosed state. He preferred the method adopted to that of introducing bougies into the uterus.

In the discussion which followed, Herr Sänger gave it as his opinion that the risks of pregnancy were not so great as those of labour; pregnancy gave the heart time to accommodate itself to the new order of things, while labour did not; labour aggravated the cardiac mischief, and he preferred expectant treatment, at any rate until the symptoms were extremely urgent, and threatened the patient's life. Herr Zweifel thought that pregnancy also had a bad effect on heart disease, and had seen pregnant women die suddenly without warning

—unaware that their hearts were affected. He thought, however, that induction of premature labour was of doubtful benefit, though he would not refuse to do the operation in the hope of at least relieving the patient when the symptoms were threatening.

Distinctions between Twins from the Same and from Different Ova (Rumpe).—The following is a summary of the results in the investigation of 149 cases of twin births, chiefly at the Marburgh Klinik:—

1. In both varieties, but especially with different ova, there is a preponderance of boys.
2. Twins from separate ova are borne mostly by multiparæ, and by mothers in the middle period of sexual life; twins from a single ovum are borne chiefly in the early and late period of sexual life, either by primiparæ or by multiparæ.
3. With one-ovum twins, the differences in weight are, on an average, greater, through mutual influence on the path of the intermediate circulation; in this variety of twins, too, cephalic presentations are more frequent than in the other.
4. Abortion, premature birth, death of one fœtus, malformations and pathological conditions are far more common in the case of single-ovum than of double-ovum twins.
5. Heredity, in the matter of bringing forth twins, seems to be almost confined to twin births from separate ova.

The author is disposed to separate the two classes of twins strictly from one another. The origin of twins from two ova is a perfectly normal process; while their development from a single ovum must be looked upon as pathological.—(*Deut. Med.-Zeitung*, 19th September, 1892.)—T. K. M.

DISEASES OF THE THROAT.

By JOHN MACINTYRE, M.B.

Transformation of Innocent Growths into Malignant Conditions.—The possibility of this has long been admitted, and Dr. Balloch, in the *Medical News* of 17th January, 1893, takes up this point. He comes to the conclusion that such changes take place more frequently in mesoblastic tissues than others. In the larynx, the most important contribution to the subject is by Dr. Semon, who in 1888 made a collective investigation of 10,747 cases.

Sodium Cantharidate in Phthisis.—Report of 21 cases treated; result unfavourable (Schulze, *Münchener Med. Woch.*, 1892, No. 48).

Laryngectomy.—Dr. Lanz gives an interesting review of this subject and notes of five cases of partial operation—two for lupus, one for sarcoma, and six for carcinoma. In only one of the latter did death result from operation. Recurrence in another shortly after operation.—(*Archiv für Klin. Chir.*, Band 44.)

Actinomycosis of Right Cheek and Extension to the Lungs.—Dr. Poucet (Lyons) records a case where a woman had a swelling in the right submaxillary region after extraction of a tooth. The parotid and right cheek formed abscesses and fistula. Eight months after the temporal region became affected. Pulmonary symptoms began, and although there were physical signs of pulmonary phthisis, no bacilli were found. Typical yellow granules of actinomycosis were got. Patient remains under treatment. —(*Medical Week*, 23rd December, 1892.)

Voice Training.—Four papers were read at the Nottingham meeting of the British Medical Association in August last. Mr. Lennox Browne read one, "Faults in Voice Production which lead to Throat Disease," and Dr. Middlemas Hunt, "On the Loss of the Singing Voice," while Mr. Ellis read a note on a "A Frequent Cause of Throat Irritation and Congestion in School Teachers." These four papers were taken together, and after a prolonged discussion the following resolutions were adopted:—

"In consideration of the injurious influence exercised upon the vocal organs by improper use of their functions, and of the insufficient attention hitherto given to the subject of systematic voice training, the members of the Laryngological Section of the British Medical Association desire to urge upon educational governing bodies the importance of a more general recognition of this subject as a distinct branch of education, especially in the case of those preparing for vocations which require much speaking in public. They would suggest the cultivation of at least an elementary knowledge of the physiology of the vocal organs, and of the principles of scientific vocalisation, by school teachers and others associated with the education of the young."

Surgery of the Frontal Sinuses.—A discussion took place on this subject in the British Laryngological and Rhinological Association, in December, 1892.

The discussion was opened by Mayo Collier, who described a number of cases which had come under his observation. Messrs. Lennox Browne, Dundas Grant, and others also described illustrative cases where operation had been performed. Those interested in this branch of surgery and the connection between affections of the frontal sinus and the nose will find a report of the discussion in the *Journal of Laryngology* for January, 1893.

Hypertrophy of the Lingual Tonsils.—Dr. William Robertson of Newcastle gives a *résumé* of the papers on this condition during the past year in the *Journal of Laryngology* for January, 1893. Special interest attaches to the work of Mr. Wyatt Wingrave who, from the anatomical, and particularly from the embryological point of view, wishes the tongue described in two parts, oro-glossus and pharyngo-glossus. In the text, reference is made to the existence of ciliated epithelium lining the crypts of the lingual tonsils. As a great many authors have had occasionally serious hæmorrhage from the destruction of the part, Lugol's solution is recommended.

Iodine bic., ...	gr. vi.
Iodide of potass, ...	gr. xii.
Ol. menth. pip., ...	♏ xii.
Glycerini, ...	℥ i.

The painting daily with this solution, as a rule, suffices to remove the conditions.

Intubation.—This question is engaging as much attention in America as ever, but it is noticeable that, whereas the discussions in that country for a long time were nearly all on the side of intubation, now we find evidence of the discussions partaking more of part intubation and part tracheotomy. At the New York Academy of Medicine, in November last, Dr. O'Dwyer read a paper on "Intubation *versus* Tracheotomy." He maintains the advantage of tracheotomy and prefers it.

Dr. Pilcher of Brooklyn contributed very much to the discussion.

Dr. Lovett gave an interesting note of the result of 21,000 cases of tracheotomy with 28 per cent of recoveries.

Dr. Waxham, of Chicago, has performed the operation of intubation in 421 cases, with 34 per cent of recoveries in the first 100; 27 per cent in the second; 34 per cent in the third; 40 per cent in the fourth; and in the last 21 there had been 7 recoveries.

The second part of the discussion was whether intubation had supplanted

tracheotomy, and considering that several thousands of cases have now been operated upon by this measure, this part of the question could be easily answered in the affirmative.

On Diphtheria.—The author gives an excellent report of 455 cases of diphtheria in Kiel during the years 1889 and 1890. 213 cases required tracheotomy, and 33 per cent of these recovered. In 26 cases of death after tracheotomy, it was found that the disease had extended to the bronchial tubes. In the others, death resulted from failure of the heart. The presence of Loeffler's bacillus confirmed the diagnosis in doubtful cases. Nearly half of all the cases died. The treatment consisted of mercurial and chloral sprays, with internal treatment of turpentine and stimulants.—(Dr. Hoppe-Seyler, *Deutsche Archiv für Klin. Med.*, Band 49, Heft 6.)

The International Congress, Rome, 1893.—The organising committee for the Section of Laryngology at the forthcoming Congress in Rome is as follows:—Dr. d'Aguano (Palermo), Dr. Dionisio (Turin), Dr. Egidi (Rome), Dr. C. Labus (Milan), Dr. F. Massei (Naples), Dr. Massini (Genoa), Dr. A. Fasano (Naples), Dr. F. Felici (Rome), Dr. F. Patelli (Venice); and for the Section of Otology—Dr. Brunetti (Venice), Dr. Cozzolino (Naples), Dr. de Rossi (Rome), Dr. Ficano (Palermo), Dr. Gradenigo (Turin), Dr. Grazzi (Florence), Dr. Longhi (Parma), Dr. Sapolini (Milan).

Books, Pamphlets, &c., Received.

Diseases of the Skin: their Description, Pathology, Diagnosis, and Treatment, by H. Radcliffe Crocker, M.D. Second Edition, with 92 Illustrations. London: H. K. Lewis. 1893.

Cheyne-Stokes Respiration, by George Alexander Gibson, M.D., D.Sc. Edinburgh: Oliver & Boyd. 1892.

Mental Nursing: a Text-book for Asylum Attendants and Nurses, by Wm. Harding, M.D. London: The Scientific Press. 1893.

The Medical Annual and Practitioner's Index: a Work of Reference for Medical Practitioners. 1893. Eleventh Year. Bristol: Wright & Co.

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ORIGINAL ARTICLES.

CLINICAL MEMORANDA,

Being Selected Cases from the Wards of

Dr. M'CALL ANDERSON,
Professor of Clinical Medicine in the University of Glasgow.

(Reported by Wm. R. Jack, M.B.)

III.

4. *Hæmorrhage into the Spinal Meninges* (?).

W. R., aged 42, a builder, was admitted to Ward II on 21st January, 1893, complaining of loss of power in the arms and legs of a week's duration.

His father died at the age of 43 of "rheumatism," his mother of pleurisy. He has had seven children, of whom two died young; the others are alive and well.

He himself has always been a healthy man, with the exception that for the last four years he has had "rheumatism" of the shoulders.

A week before admission, while in his house and leaning against the dresser, he suddenly fell to the floor. There was no loss of consciousness, but both arms and legs were found to be completely paralysed. There was no ascertainable cause. Since then, his bowels have been obstinately constipated, and there has been dysuria.

Since the onset of his illness he has been recovering, and is now able to walk. As he does so, his legs are seen to be tremulous and weak, but there is no rigidity. Spasms are also absent. Both knee-jerks are exaggerated—the left somewhat more than the right. A slight ankle clonus is present upon the left side. On admission it was also present upon the right side, but cannot now be made out there. Both legs are easily held down against his efforts to raise them, but the left offers much less resistance than the right. The right arm can be moved with comparative freedom, the left but slightly. In the right hand the dynamometer registers 45, while in the left it is *nil.* The tendon reflexes are exaggerated in both arms, but more in the left than in the right. There is no anæsthesia, but he complains of numbness all over the body, especially in the legs and arms, and across the small of the back. Pressure upon the spine elicits tenderness extending from the sixth cervical to the second dorsal vertebra.

The patient was made to rest in bed, the bowels were regulated, and the state of the bladder carefully watched. A fly-blister was applied over the tender portion of the spine. He was ordered 1 dr. of the liquid extract of ergot thrice daily, and at night-time a hypodermic injection of $\frac{1}{100}$ gr. atrop. sulph.

Under this treatment he rapidly improved, and on 15th February he walked much better and less tremulously. The dynamometer registered 42 in the left hand, in the right 122. The bowels were still very costive, but the dysuria had ceased to trouble him. The spine was no longer tender.

From this date the power of walking continued to improve, until there was no noticeable tremor, but he always complained of a slight stiffness, especially in the left leg. The grasp of the hands did not improve beyond the point above indicated.

General health was fairly good, but he said that he still felt rather weak, and the bowels, though less costive, still required aperients to move them. He left on 1st March.

Remarks by Dr. Anderson.—This is a very unusual case, not on account of the extent of the paralysis, but on account of the startling suddenness with which the symptoms made their appearance, altogether without premonition, and unaccompanied by sensorial disturbance. We were thus led to suspect that hæmorrhage—which, as a rule, occurs earlier in life within the spine than within the cranium—was the cause of the mischief, not into the substance of the cord, but within the meninges or outside the dura mater; for, in the latter case, while there may be sudden and complete paralysis of motion, sensation may be little, if at all, interfered with; and while, in hæmorrhage within the grey matter of the cord, the symptoms generally become more and more pronounced, and a fatal issue is the rule, in meningeal hæmorrhage a more or less complete recovery, as in our patient, may reasonably be anticipated.

Whether there was any antecedent organic lesion of the cord—tumour, or the like—it is impossible to say, although it is worthy of note that, on admission, there was tenderness over the lower cervical and upper dorsal spines; while, for several years, the patient had complained of pain referred to the shoulders.

5. *Left Hemiplegia complicating Tumour at the Root of the lung.*

T. L., æt. 48, ironplaner, was admitted to Ward II of the Western Infirmary, under the care of Professor M'Call Anderson, on 8th November, 1892, with loss of power in the left arm and leg of eight days' duration.

The family history reveals nothing bearing on the case. From 1866 to 1878 he served in the army, and had occasional attacks of malarial and other fevers at foreign stations, but otherwise he enjoyed good health. After his discharge he remained well until two months ago, when he had an attack of "inflammation of the lungs," which kept him in bed for seven weeks. Eight days before admission, during convalescence, as he was walking along the street he felt his left leg become heavy, so that he could only lift it with difficulty. He describes it as "trailing." Next day his left arm also became weak, and within four days paralysis was complete in both limbs.

On examination, anæsthesia was found to be present in the paralysed limbs, affecting particularly their distal parts, and being more pronounced in the leg than in the arm. There was no rigidity or wasting, and no exaggeration of the reflexes. A basic systolic murmur was present.

A cortical lesion of the brain, involving the centres for the arm and leg, but not the face, was diagnosed, and as the urine was albuminous, it was considered probable that the lesion was hæmorrhagic, and the more so as the paralysis was left sided, thus rendering embolism less probable.

The fatal attack occurred on the evening after admission. Up till then the patient had remained in much the same condition. At 8·15 he attempted to rise in order to make water, but in the attempt he suddenly fell back upon the pillow. His face became flushed, and his breathing stertorous. Consciousness was lost at once, and in a few minutes he was dead.

At the *post-mortem* the right hemisphere was found to be bulkier than the left.

The vessels at the base of the brain were slightly atheromatous. On cutting into the right hemisphere, a large cavity occupied by altered blood was exposed. It was situated in the corona radiata, and undermined the upper part of the ascending parietal convolution, the upper and anterior parts of the parietal lobe, and the corresponding portion of the convolutions on the median surface. There was no blood in the lateral ventricles, but they contained an orange-coloured fluid.

The left ventricle of the heart was found to be enlarged. The aortic valve was competent, but the arch of the aorta was very atheromatous and dilated.

The right lung was somewhat firmly adherent and highly œdematous. The left lung was still more firmly adherent. At its root a bulky tumour was found, extending into the substance of the lung. It centred around the main bronchus and its branches, the walls of the latter being incorporated with its substance, and it reached the surface along the interlobular connective tissue, but did not extend under the pleura. Its tissue was of a dead white appearance, and moderately consistent. It presented over a considerable surface inside the pericardium, but did not extend to the visceral layer. On microscopic examination in the fresh state, the tumour was found to consist of a great quantity of cells, usually small, with round or oval nuclei. There was a very sparse fibrous intercellular substance, and nothing like a cancerous stroma. The tumour, therefore, was a round-celled sarcoma.

NOTES ON *POST-MORTEM* EXAMINATIONS IN CRIMINAL CASES CONDUCTED BY CROWN OFFICIALS IN GLASGOW.

By JAMES DUNLOP, M.D.,
Medico-Legal Examiner for Glasgow; Professor of Surgery, Anderson's College Medical School.

IN the Glasgow *Evening Citizen* of date 4th March, 1893, there may be read the following short paragraph:—

"The Lord Justice Clerk remarked last night that one thing we had reason to be proud of in Scotland was—that we had the most perfect system which, he believed, existed in the world in dealing with crime."

I fear that this opinion, even though expressed by such eminent authority, will not meet with the cordial approval of many members of the medical profession in this city. There are not a few, if we judge from the letters which appeared recently in the columns of a daily paper, who hold strongly to the view that in every case of a *post-mortem* examination directed by the Crown authorities, and conducted under a warrant of the Sheriff of the county, where there is a prisoner in charge, or a person likely to be charged, a medical man representing the prisoner should always be present to take part in the enquiry as to the cause of death, and to give evidence, if required, for the prisoner; the professional services rendered by said medical man being remunerated by the Crown through the Exchequer. It has been made the subject of complaint, against the present practice, that there is often marked discourtesy on the part of the medical inspectors themselves, in not inviting their professional brethren who have been interested in the case, or who have been in attendance upon the deceased, or who may last have seen the individual during life, or the first to see the body after death, to be present at the *post-mortem* examination, and possibly to take part in it.

Another complaint against the present practice is that frequently there is only one medical man authorised by the remit of the Sheriff to conduct a *post-mortem* examination for the purpose of ascertaining the cause of death. With this latter complaint I quite sympathise. The objection to the employment of two medical inspectors in every case of a remit from the Sheriff is, I understand, a purely pecuniary one. The Exchequer will not pay fees for a report of two medical men when that of one will suffice, and it is only in cases in which the Crown authorities consider individuals may be charged with crime of a serious character that two medical men are employed—the evidence of two men being needed in Scotch law to prove a report.

Now, with regard to the complaint of want of courtesy in not inviting professional brethren interested in the case to be present at the examination, the profession in this city is reminded that the medical expert has no choice in the matter. It is not within his province to grant authority to any one to be present for the purpose of corroboration, or to be able to give independent evidence either for or against the Crown. The directions issued by the Crown authorities in Edinburgh for the guidance of medical inspectors in the conduct of *post-mortem* examinations, a copy of which was sent me, along with the notice of my appointment, twenty-two years ago, as one of the medical inspectors of the city, are very decided and emphatic. Under heading "General Duties of Inspectors," and in Clause I, it is laid down that in particular the medical man who attended the deceased before death, or who was the first to see him after, "*shall not be appointed one of the two inspectors as a matter of course;*" and in Clause VII, "*No one should be allowed to be present at the examination out of mere curiosity*, and any one not engaged in the inspection, but who may be in attendance to give information, or for any other purpose, and who may afterwards become a witness, should remain in an adjoining room." These directions have been specially emphasised from time to time by the Crown Office since the days of Mr. Watson, Lord Advocate (now Lord Watson), down to the present time.

More than once the medical inspectors have had their attention drawn to the necessity of paying strict regard to these directions of the Crown, and the case of Palmer, the Rugeley poisoner, has been quoted as a warning to them. It may not be uninteresting to the reader of the *Journal* to know the special points in the Palmer case, which was tried on the 14th May, 1856, to which the attention of the inspectors was drawn.

Palmer was a surgeon in Rugeley, Staffordshire, who was accused of poisoning by strychnine John Parsons Cook, a sporting solicitor, whom he attended in his last and fatal illness. A *post-mortem* examination having been ordered, it was conducted by Dr. Harland, of Stafford, assisted by Mr. Devonshire, of London University, and Mr. Newton, a surgeon of Rugeley, the two latter being the operators, while the former took notes.

On his way to the hotel where the examination was to be made, Dr. Harland was met by Dr. Palmer. "I am glad," said Palmer, "that you are come to make the examination. Some one might have been sent whom I did not know." And Palmer accompanied him *as a friend*, and was present at the examination. Harland asked Palmer what was the case, adding the words, "I hear there is a suspicion of poisoning." "Oh, no!" said Palmer, "Cook had an epileptic fit, and you will find old disease in heart and head."

During the examination, while Newton and Devonshire, the two dissectors, were opening the stomach in order to pour its contents into a clean jar, Palmer, smiling at the time, gave the one operator a push which knocked him against the other, with the result that some of the contents of the stomach were shaken out of the organ and into the cavity of the abdomen, and were lost.* What remained of the contents of the stomach, with the organ itself, were placed in the jar, the mouth covered with two bladders, fastened and sealed. The jar was then placed on the table near the body, and the examination of the other internal organs was resumed. Soon the jar was missed. "Where's the jar?" was the question asked. Palmer from another room brought back the jar, and the bladders over the mouth of the jar were found to have been cut through with a sharp instrument. Palmer said he did not cut it.

Palmer was afterwards put on his trial, found guilty of murder, and executed.

The late Mr. Sheriff Bell was of opinion that, in the interests of the due administration of justice, and to ensure that no miscarriage should take place, no police surgeon who had made an external examination of a body, in the discharge of his duties as a casualty surgeon, should be a medical inspector. He held that the duties of both offices were incompatible. I had to, and did, resign my appointment as Casualty Surgeon to the Southern District of Police before Mr. Bell would give his sanction to my becoming a medical inspector for the city.

With regard to the opinion that has been expressed that the Crown should authorise and pay for the employment of a medical man to be present at an examination as the representative of the prisoner, and to give evidence, if necessary, for the defence, I can only say that the medical experts are supposed and expected to discharge their duties without bias—without knowing either a prosecution or a defence. They have no interest in the verdict—no desire that the prisoner should be found guilty. They have duties, often very unpleasant, which they endeavour to discharge to the best of their ability, and with the utmost fairness and impartiality.

Were this important part of criminal procedure found in practice and in its results to be bad, defective, and in need of alteration, it could not well be said that the system of dealing with crime in Scotland was the most perfect in the world.

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* Dr. Taylor found no strychnine in the contents of the stomach.

GYNÆCOLOGY IN GENERAL PRACTICE.*

By J. K. KELLY, M.D.

To attain thorough knowledge of any subject it is absolutely necessary that men devote to it a special study, and to attain perfect skill in any art it must receive special practice. It is on this principle that specialism in medicine is based, and it has certainly proved of incalculable service to its progress both as science and art. It is but reasonable that a man who devotes himself to a single branch of our profession should become more proficient in it than if he had spread his energies over the whole region of medicine. The sphere of medical specialism, however, must always be limited, and will be the more limited the more accomplished are those who pursue general practice. And in gynæcology this is specially the case. It is in general practice that cases are first seen, and in the great majority of instances it is when first seen that they can be best and most easily treated. There will, undoubtedly, always be cases that resist even early and appropriate treatment; and will require the exercise of special appliances for their cure, but cases which are curable by early and appropriate treatment form by far the greater part of the diseases of women. When they are recognised and appropriately treated, they should never come within the sphere of the specialist at all.

It is from this point of view that I wish to bring before the Society notes of a few cases illustrative of gynæcology as a subject not for a specialist, but for the general practitioner.

By far the most frequent disorders of women are those that originate from parturition, either premature or at term. Some of these disorders are the immediate complications, and others the remote results of this function. Of the immediate complications of labour and abortion, the most alarming and the most rapidly fatal is hæmorrhage. The occurrence of this after labour is always watched for, and its prevention by the proper delivery of the placenta and its treatment by clearing out the uterus and inducing contraction by various means, form part of the ordinary duties of the obstetrician. But it sometimes happens that the bleeding does not take place at once, but at an interval of some days or longer after the confinement. In these cases the same rule to clear out and douche the uterus applies, but there is frequently some hesitancy in adopting this rule. If, however, the hæmorrhage is in any quantity, or in any way persistent even in small quantity, seeing that it indicates the presence of a morbid agent in the uterus, the rule should be acted upon.

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* Read at a Meeting of the Glasgow Southern Medical Society, 16th February, 1893.

Mrs. R. was confined of her second child 15 days before I saw her. For the last two or three days she had been bleeding profusely, and I found her lying in quite a pool of blood. The uterus was enlarged, but not painful, and the os admitted the finger without much difficulty. I got her at once lifted on a table, washed out the vagina, cleared the uterus of several small fibrinous clots and pieces of decomposing tissue, applied strong liq. ferri perchlor. to the interior surface, and douched the cavity till the fluid returned quite clear. There was no further bleeding, and the woman was perfectly well in a few days.

As some of you may not have done this simple operation, or even seen it done, I may describe it shortly. The woman is put in the lithotomy position on a table, or on the side of the bed, with the buttocks overhanging the edge. Chloroform is not necessary, and in the case I have mentioned was not used, but in many cases it is preferable to use it. The posterior vaginal wall and perinæum are then retracted by the broad, short, speculum of Martin. The anterior lip of the os uteri is caught by hook forceps, and the uterus drawn near or quite to the vulva. This curette is then introduced, and the uterine wall systematically scraped, so that the curette is applied to every part of it. If there is a doubt about any part of it being cleared, it should be gone over another, or even a third time. The uterine catheter is then introduced to wash out all the *debris* that may be left, this washing being done with a hot antiseptic solution. It perhaps adds to the security in cases of hæmorrhage if a small quantity of liq. ferri or lin. iodi is then introduced into the uterus by Braun's syringe, followed again by the hot intra-uterine douche. The vagina and vulva are then thoroughly cleansed, and the woman put back to bed.

The same treatment is much more frequently required after abortion. I should rather say both during and after, for the delivery of the ovum at an early stage in the abortion is frequently required on account of hæmorrhage. When this cannot be done by the hand alone, the rapid dilatation of the cervix and the clearing out, curetting, and douching of the uterus puts the woman at once out of all danger. After abortion, however, there is very frequently some portion of the ovum retained, causing more or less constant hæmorrhage for a considerable time. This bleeding is in general of small amount, but the course is varied by occasional outbreaks of very copious and alarming bleeding. Many years ago, I remember being struck with this fact, in the case of a poor woman who had miscarried at the third month. She had an almost constant slight bloody discharge for some months after, and at what she thought were her menstrual periods, she had always an excessive flow. On examining her I found a small piece of tissue, which I regarded as placental, lying in the cervix, the removal of which at once put a stop to the bleeding.

The cases that come under this category are exceedingly numerous.

Mrs. L. had a miscarriage three days ago. The hæmorrhage is continuing in excessive quantity. The curette is used, followed by liq. ferri perchlor. and the hot douche, and not a drop of blood is lost thereafter.

Mrs. S. had an abortion three months ago. Since then she has bled constantly. She has had ergot freely without any effect. The night before I saw her, the bleeding was so excessive that she was thought to be dying. I cleared the uterus of a quantity of *debris*, applied liq. ferri, and douched with very hot water. In a week she was moving about.

Passing from hæmorrhage, there is another complication of the puerperium, which is more insidious, but hardly less deadly than hæmorrhage—septic infection. Sometimes it accompanies hæmorrhage, as in the following case:—

Mrs. M'K. had a miscarriage at three months several weeks ago. Since then she has been reduced to an extreme degree of exhaustion by hæmorrhage and fever. She has been treated by intra-uterine applications of carbolic acid and iodine, and astringent vaginal injections. Internally she has had quinine, iron, &c., without relief. When I saw her she could not raise her head from the pillow without fainting, and it was with some hesitation that we subjected her to operative treatment. There was evidently, however, no chance of saving her life except by putting a stop to the hæmorrhage, the fœtid discharges, and the pyrexia, which were rapidly killing her. She suffered considerably from the shock of the little operation, but there was no more bleeding, and in a few days she began to rally. Some months afterwards when I saw her again, she had returned to her ordinary household work, but was still extremely pale and emaciated. Her menses had not returned—a result probably of the extreme anæmia.

Apart from hæmorrhage, septic infection manifests itself in two forms in the puerperal state. It may be either general or local—the difference being perhaps due to a difference in the agents that produce the disease. A slight degree of general infection may pass almost unnoticed, being indicated only by a slight rise of temperature, some thirst, and a little general feeling of discomfort. Unless we are in the habit of taking the temperature, we may miss these cases altogether, and so perhaps save ourselves some anxiety. But it is safer to be on the watch for a rise of temperature, for what is at first a mild case may become serious if neglected. There may be no local signs, such as pain or tenderness, or unusual discharge, and yet such cases should be treated by the intra-uterine douche. They are due to absorption of some septic material from the uterus, and by means of a carbolic acid douche this material may be rendered aseptic, and cease to be a morbid agent. I have seen many cases of this kind.

Mrs. D. delivered her fourth child twelve days ago. Has been rather weakly from the first, and since the third day the the temperature has ranged between 100° and 103.° Is having intra-uterine sublimate douche twice a day. Has no pain, is dull and listless, but does not feel otherwise ill. There is a very slight discharge which escapes from the uterus only on introducing the intra-uterine catheter. The point as to which my opinion was asked was whether something further than the douche should be done—the something further being, of course, the use of the curette. I advised that for a day or two longer the douche alone should be tried. I am not sure that that was the wisest advice to give, but the patient got on well, the pyrexia declining within the next few days.

There is one point in this case which will frequently be observed by anyone who uses the intra-uterine douche, and to which special attention should be given—viz., the retention of the lochial discharge in the uterus. Mrs. D. had worn a pessary for retroflexion, and it is in a retroflexed uterus that retention of discharge might be most probable, but it is not confined to such cases. It is due, I think, to the cervix having contracted to a greater degree than the body of the uterus, so that the discharge can only escape through the cervical canal when the fluid has accumulated sufficiently to raise the pressure of the uterine walls above that of the cervix.

As to the treatment of these cases, the rule I have hitherto laid down for myself is to be content with the intra-uterine antiseptic douche if the pyrexia is moderate and the discharge slight, as I think these facts indicate that the morbid material present is in very small quantity. When the fever runs high, and the discharge is profuse, however, I think no time should be lost in removing all the decomposing tissue from the interior of the uterus. Too frequently it happens that we hesitate too long.

Mrs. D., primipara, confined fourteen days before. Temperature had run high for several days. There were frequent shiverings, a considerable amount of nasty smelling discharge, distension of the abdomen, and some peritonitic tenderness. I curetted, applied liq. ferri and the hot antiseptic douche, but patient died next day.

Quite distinct from those cases of general infection are the cases of local infection during the puerperium. In these the signs are those of pelvic infection, and the general condition is affected only as it would be in any other local infection. There are localised pain and tenderness, and if the case goes on, a distinct infiltration of the connective tissue takes place, forming an actual tumour. This may undergo absorption and completely disappear.

Mrs. A., multipara, had an abortion a week ago; has great pelvic pain and tenderness, with a nasty uterine discharge. The uterus is enlarged and tender, but there is no distinct infiltration of the parametrium. I removed a good deal of decomposing matter from the uterus in the usual way. Within the next few days a massive swelling took place in the connective tissue, but it underwent resolution without farther accident. Perhaps I should mention that at the time of the abortion she was nursing a child with scarlet fever, although I do not believe that fact was connected with the miscarriage, or with the subsequent cellulitis.

In some cases, however, the connective tissue infection goes on to the formation of an abscess which may ultimately open either externally or into some mucous canal.

Mrs. P. was delivered of her fourth child in 1885. Her puerperium seemed normal for the first three weeks, after which pelvic inflammation began. This formed a swelling in the right side of the pelvis, and gradually passed to the right groin, where, two months after the confinement, a small abscess formed of about the size of a hen's egg. This was opened and healed normally. Thereafter, she complained more or less of pelvic discomfort, but on the whole was very well until she was delivered of her fifth child in February of last year. It was a case of placenta prævia, and from the first her temperature was febrile, and she complained of pain in the hypogastrium and left groin, and also on moving the left limb. When I saw her a fortnight after the uterus was movable, and purulent matter was escaping from its cavity. I removed a quantity of *debris* from the uterus, and hoped the case would go no farther. The high temperature, however, continued, and when I saw her eight days after, I found the uterus a good deal enlarged, very painful over the left side along the attachment of the broad ligament, but without evident effusion into the connective tissue. She continued in poor health, the temperature sometimes coming down to normal, but the pelvic pains continuing and confining her to bed. When I saw her again in the beginning of May, three months after her confinement, I found the uterus presenting a large mass of firm infiltration on its anterior surface, coming close to the anterior abdominal wall, and bulging slightly towards the vagina. I examined carefully for fluctuation, but could find none. She was then having slight chills and profuse perspirations, but the temperature, so far as taken, was not much above normal.

I did not see her again till July. In the interval, however, Dr. W. L. Reid had been called in, and had found no physical evidence of suppuration. In July she was having occasional discharges of pus per rectum. The uterine tumour was not so large as when I had seen her before. The temperature was mostly about normal, but there were occasional leaps up to 101° or 102°, associated in the patient's mind, with cessation of discharge of pus for the time being. In the beginning of August the condition remained much the same, and as it was evident that the pus did not escape satisfactorily per rectum, and the illness, which had already lasted six months, seemed likely to be indefinitely prolonged, I opened into the tumour from the anterior fornix of the vagina. The incision at once gave vent to a considerable quantity of pus. The finger introduced through the incision could be passed, not only up the left side of the uterus, but also up the right side, passing amid soft friable tissue. It felt as if the whole parametrium were opened up by the pus. The cavity was thoroughly washed out and drained, the woman had no further trouble, and in two months I met her walking about in excellent health.

I have detailed this case at some length, as I wish to ask your attention to certain of the points. First of all, the slow formation of the pus. This is a process not of a few days, but usually of some weeks. Secondly, while the suppuration in this patient took place in the pelvic connective tissue, this is not always the case. In her first illness the abscess was seated outside of the pelvis in the right groin. In many cases, however, it gets farther away from the pelvis than this. In the first case that ever I had of puerperal abscess many years ago, it formed on the back near the angle of the scapula. In a case lately in the Samaritan Hospital, the main seat of the abscess was just below the right kidney, though it was opened and drained near the anterior iliac spine. In the third place, I would call your attention to the slight influence the cleansing of the uterus had. This, I think, was due to the delay in effecting it. The moment there is any uterine tenderness in the puerperium, associated with a rise of temperature, the uterine douche should be used, and if this is ineffective in subduing the symptoms within two days, the curette should be applied. A fourth point to note is the difficulty in detecting fluctuation in the pelvis. There is little doubt that in the case I have described pus had formed three months after her confinement, when I saw her in May. But I was unable to detect it. Neither was it detected in June. Yet, in July, the abscess began discharging into the rectum. Might we not have trusted to the rational symptoms of pus-formation which were present in May, and cleared out the pelvis through an abdominal section, and so saved the woman three months of suffering?

The discussion of this question, however, would lead me beyond the limits of the present paper.

Among the remote results of parturition the most common is subinvolution, represented chiefly by an enlarged uterus occasionally becoming tender to the touch. In these cases we have sometimes an increase, sometimes a diminution of the menstrual discharge, usually leucorrhœa, sacral, and often also hypogastric pain. Subinvolution is one of the most frequent causes of female suffering, and, as it is much more easily prevented than cured, the chief stress should be laid upon the treatment of the puerperal woman. This consists in the observance of two laws—rest and asepsis, *i. e.*, in the absence of both mechanical and chemical irritation. Exertion too soon after childbirth and imperfect cleansing of the uterus are the chief causes of subinvolution, and in preventing these faults our chief reliance must be placed.

When subinvolution of the uterus has been produced, the condition is one of the most troublesome to treat, and usually puts to a severe test the patience of both patient and physician. So far as my experience goes, the best results are got from regular hot vaginal douches, occasional painting of the cervix, with lin. iodi., cold hypogastric compresses, and, internally, the use of bromide and chloride of potass, with tinct. hydrastis. If the uterus is very heavy, a pessary is sometimes of service. Along with these, change of air, avoidance of severe physical exertion, and daily evacuation of the bowels usually relieve, if they do not cure, the condition. It has long been recognised that if these cases get well enough for pregnancy to occur, and go on to term, a carefully managed puerperium will do more for them than any medical treatment.

I will pass over the other accidents of labour, both immediate and remote, such as lacerated perineum, lacerated cervix, prolapsus uteri, &c., and take the most common complaint of women, which may or may not be due to puerperal causes. This complaint is variously named, but, for our present purpose, the name of uterine catarrh will suffice. It is manifested by more or less hypogastric and sacral pain, more or less leucorrhœa, more or less dysmenorrhœa, and change in the quantity of the menses. So common is this complaint that women mostly regard it as part of the inheritance of their sex, and come to the physician only when pain becomes intolerable. Uterine catarrh may be often relieved by counter-irritation, by hot vaginal douches, cold hypogastric compresses, painting of the cervix with lin. iodi., but the most effective means of removing it, as a rule, is to scrape away the diseased mucous membrane of the uterus by the curette.

Mrs. R., æt. 37, has been married eleven years, never pregnant, suffers from constant burning pain in hypogastrium, and severe dysmenorrhœa. The menses are clotted, and have a bad smell, and she has to keep bed during her illness. In the intervals has great leucorrhœa. Is almost constantly an invalid. After trial of other treatment, the currette was used, followed by application of liq. ferr. perchlor. The dysmenorrhœa and excessive menstruation were completely relieved, and, in a few months, she began to put on flesh, and was stronger than she had been for years.

Mrs. S., æt. 32, married ten years. Shortly after marriage had a premature child at seven months, which lived six days. This was followed by puerperal fever and inflammation, which confined her to bed for six weeks. Since then has suffered from constant leucorrhœa—worse before and after menstruation. The menses are regular, preceded by an increase of the hypogastric pain which is always present. Uterus is large, endometrium tender and bleeding to sound. Besides the use of the curette in this instance, a ring pessary was introduced to relieve the weight of the uterus. Menstruation became painless, and the leucorrhœa almost completely disappeared. The patient was perfectly restored to health, and became ruddy and stout.

In such cases the effect of the curettage is very marked, but unless pregnancy occurs the uterine catarrh is very prone to return, as it seems to be doing in the former of these two cases I have mentioned, after the lapse of two years.

Another great class of cases met with in practice are those in which sterility is the most outstanding fact. Practically, sterility comes before us under two main forms—the sterility of women who have never been pregnant, and that of women who have been so—we might name them primary and secondary sterility. In many instances primary sterility results from the same causes as secondary sterility, but this is by no means always the case. Primary sterility is frequently associated with a very small os tincæ. Along with this there is usually a conical cervix, on the apex of which the diminutive os is situated. In certain cases this is all that is wrong, and the woman is perfectly well—so well, in fact, that her sterility will probably be supposed due to some mysterious incompatibility between her husband and herself. Mostly, however, dysmenorrhœa is present, and grows gradually worse. Frequently, in addition to the dysmenorrhœa, the fundus becomes tender to pressure, indicating that metritis has supervened upon the stenosis. It probably results from the stenosis. A further result of the conical cervix is a mechanical one. The long cervix must lie along the course of the vagina, and presents the os forward towards the lumen, while the normal cervix lies across the lumen, and presents the os tincæ to the posterior vaginal wall. The result of this is that the cervix is constantly turned forwards, and therefore tends to, and often actually does, throw the body of the uterus backwards, causing a retroversion.

Mrs. B. had long suffered from dysmenorrhœa, which had been greatly aggravated since her marriage some months before. The cervix was conical. The uterus, unusually large for a multipara, measuring fully 4 inches to the sound. The cervix was dilated, the endometrium curetted. Within a year she was delivered of a child at term.

Mrs. S. has had dysmenorrhœa for several years. This has been much worse since her marriage seven months ago. There is a pin-hole os, uterus is enlarged, fundus tender. I enlarged the os by lateral incisions, dilated the cervix, and curetted the endometrium. In two or three months I heard of her being pregnant.

Even if pregnancy does not result, the dilatation and curetting relieve the symptoms.

Retroversion is another cause of sterility which is sometimes met with in multiparæ. When uncomplicated with endometritis, the mere reduction of the displacement and the wearing of a pessary will sometimes ensure pregnancy.

Mrs. G., aged 28, married two years, never pregnant. Has always suffered from dysmenorrhœa. Has a retroversion. This is reduced, and a Hodge pessary put in. In six weeks she becomes pregnant.

But retroversion is much more frequent in women who have had one or more children, and with it usually there is a pretty severe endometritis.

Mrs. C., multipara. Last child several years ago. Suffers from endometritis and retroversion. She is curetted, and a Hodge pessary introduced. In two months she is pregnant, and goes to full term.

Mrs. M'Sk. had her last child four years ago. Suffers from endometritis and retroversion. The uterus is curetted, and a Thomas pessary put in. Pregnancy fellowed in two months, and went to term.

Metritis itself, without retroversion, is very frequently the cause of sterility. A very common history is this.

Mrs. T. had one child several years ago. Since then she has had four abortions. The uterus is greatly enlarged. There is severe uterine catarrh. The endometrium is carefully curetted, and lin. iodi applied after the curetting. Fifteen months after she is delivered of a child at the full term.

A cause of sterility, which I find less generally recognised in practice, is myoma. Sometimes this tumour gives rise to very little pain and very little increase of the menses, so that unless it grows large it remains unnoticed. Not infrequently in these cases there is a history of abortions, and not very seldom the patient has had one or more children early in married life.

As an illustration, I may quote the notes of a case I saw in November last.

Mrs. A., æt. 43, was married at 20. Had one child at term twenty-one years ago, previous to which she had been treated for inflammation of the womb, manifested, so far as she can remember, by a pain in the left groin, worse during coitus. This pain has returned of late, and has been much worse during the past two months. Menstruation is regular to-day, lasting four days, and with large clots. The pain is decidedly worse then, and her back feels so weak that she can only lie on a hard mattress. Micturition is frequent, but painless and easy. When she retains urine long, however, she has some pain before micturition. There is no pain or difficulty in defæcation. Except for a short dry cough, she is perfectly healthy. In this case I found a myoma larger than the fist filling the right side of the pelvis, and displacing the uterus to the left and forwards towards the left pubic ramus. Very little space was left between the tumour and the pelvic wall. The pain in coitus is apparently caused by pressure on the left ovary, which is at the apex of the space into which the penis must pass. The cough seems a purely reflex symptom.

For these cases of myoma the physician can do nothing but relieve certain of the symptoms if they are causing symptoms. The pressure may be lightened by a pessary, and often an elastic ring pessary gives great comfort. Ergot or hydrastis will probably check the hæmorrhage to some extent. Anodynes will relieve the pain. The only cure is by operation, and this is outside of our consideration at present.

The same may be said of the cases of sterility due to diseases of the uterine appendages. Some relief may be given by general or local means, but the only cure is by operation, and that one which only confirms the sterility.

Among the many other subjects to which I might refer, there is one of pre-eminent importance to which I must devote a few lines before ending this paper. I refer to the recognition of cancer of the uterus in general practice. If there is one thing certain in medical practice, it is that cancer is incurable by any remedy except the knife. There are many who doubt whether it is remediable even by that means. Hitherto, in this country, the surgeon has got a very poor chance of putting this point to a fair test in the case of the uterus. And this simply because the recognition of uterine cancer is in almost all cases too late. If it is curable, it is so only by its complete removal, and in ninety-nine cases out of 100, when they are diagnosed as cancer, total removal is already impossible.

There are two main causes for this lateness of diagnosis, and both of them are to a certain extent removable. The one cause exists in the ignorance of the female sex as to the importance of anomalies in their menstrual life, and especially when they are approaching or beyond the menopause. Women are, as a rule, much more afraid of a diminution than they are of an excess in their menses. They should be taught a more intelligent appreciation of their peculiar sexual phenomena, and especially that there must be a morbid cause for every morbid symptom.

This ignorance and want of appreciation on the part of women is to be referred, I think, to the same faults in former generations of physicians. To lay the blame of pelvic pains and hæmorrhages and other morbid symptoms to the door of the sex, as being part of their inheritance from Eve, was much easier than to discover their causes and alleviate them. Hence, for long generations women have been taught to believe that what appears like disease may be merely something peculiar to their sex, and therefore to be tolerated as patiently as possible. The result, accordingly, is that disease is often allowed to proceed till it is beyond the possibility of cure before a physician is consulted at all.

The other cause of late diagnosis is to be laid to our own door—to the door of the physician. It is only in general practice that there is a chance of early diagnosis. When the woman thinks herself sufficiently ill to go to a specialist, she is probably already past help. It is from the general practitioner, therefore, that we must look for a change from the present condition of things, in which ninety-nine cases out of 100 of cancer uteri are too late of being diagnosed. And we may note, in passing, that it is from the general practitioner that the public gets its medical knowledge. The principles that underlie the medical practice of the time gradually come to be appreciated by the whole people.

Supposing, then, that there is a chance of early diagnosis—in other words, that the woman is occasionally seen, and her health inquired after, what are the indications that would lead us to suspect cancer, and what means can we take to remove or confirm our suspicion?

1. *There is usually hæmorrhage.*—If it occurs before the menopause, it takes the form of an increase of the usual menstrual discharge, and this is its most insidious form. When any woman, within a few years of the menopause, begins to have menorrhagia, a local examination should be made at once. If this is deferred the consequences may be serious. When the hæmorrhage comes on after the menopause it attracts more attention, and is less apt to be neglected. It is only in the very rarest cases that hæmorrhage is absent till a very late stage of the disease.

2. *There is usually leucorrhœa.*—Leucorrhœa is so common in women that, like hæmorrhage, it is apt to be neglected altogether as of no consequence. But when women understand the care of their own health, they will understand that

leucorrhœa always indicates disease in some part of the genital canal. When it increases near the time of the menopause, it is in itself suspicious of serious disease, and still more if it begin to be fœtid. Lawson Tait says somewhere that he can diagnose cancer by the nose, but it is usually too late for us to be of any service when the cancer appeals to our senses in that way.

3. *There is usually pain.*—This pain is not always uterine in seat, but has usually its centre somewhere in the pelvis, and from this centre radiates upwards and downwards. Frequently, however, pain is absent, at least in any marked degree, till the disease is very far advanced.

When hæmorrhage and leucorrhœa and pain exist, either singly or together, in any case, a local examination should be made, and this should be pressed upon the patient with special earnestness, if this is near or beyond the menopause. And I have found that when the importance of the examination is represented to her, she is not only quite ready, but even anxious, to submit to it.

Supposing, then, that on examination, we find a small firm nodule on the portio vaginalis, or a small ulcer with a firm base, or somewhat thickened and everted lips, with erosions that bleed on being touched, the case should be regarded with suspicion. Can we do anything to confirm or remove this suspicion? So far as I know there is only one way, and that is by taking a small piece of the suspected tissue and examining it by the microscope. A negative result from this examination will not prove that the disease is not cancerous, but a positive result will at once make it our duty to remove the diseased part. So far we can proceed—so far, I think, we ought to proceed—in general practice. The operation for removal of the organ or part diseased will probably always be in the hands of the specialist, and if undertaken thus early, I believe that it would be as successful as removal of the cancerous breast has been. In this belief I am sorry I have no experience of my own to go upon. I have only twice removed the cancerous uterus, and in both cases the disease has recurred. In both, however, I am bound to say it was far advanced before I saw them. In another case in which I wished to operate, and with apparently greater chance of success, a consulting surgeon, who saw the patient, persuaded her to refuse the operation. But the experience of gynæcologists elsewhere is already sufficient to warrant a very hopeful view of early extirpation for cancerous disease. And in that view I consider that a very grave responsibility rests upon those of us who follow general practice.

THE PROPHYLAXIS AND TREATMENT OF ABORTION.*

BY ROBERT POLLOK, M.B.,
President of the Glasgow Obstetrical and Gynæcological Society.

FELLOWS,—My apology, if such be required, for bringing before this Society the subject of abortion, must be my conviction, strongly confirmed as experience grows, that from the immature separation of the ovum and its membranes from the uterus a vast amount of our gynæcological work flows, and if this premise be correct, it is surely most incumbent that at a Society such as this every light should shine on such conditions, so that their management may be most efficiently and satisfactorily conducted. I speak not so much with regard to the later months of pregnancy, when the term abortion passes into the stage of premature labour, and where the management is dominated by the principles which apply to normal parturition, but rather to that period of pregnancy which writers designate as "the non-viability" of the fœtus.

Some of the conditions which lead to abortion, such as an inflamed endometrium, produce such close adhesion of the decidua to the uterine wall, that when the ovum escapes the membranes are retained, and it is to the hæmorrhage, suppuration, and subsequent decomposition resulting from their retention that so much mischief to the uterus and its adnexæ is due. There is a popular belief, which in practice we hear daily expressed, "that very early abortion requires neither care nor attention; ladies will tell you they only had missed a period or two, and were under the impression no attention was required." I think, however, the majority of us will rather be inclined to emphasise the very opposite—viz., *the earlier the abortion the longer rest and the greater care,* arising from the closer vascular adhesion of the decidua with the uterine wall in the earlier months of pregnancy.

To treat the subject of abortion in its wider sense would comprehend the whole range of the principles and practice of medicine, for every deviation from the path of health will predispose to a lowered or altered condition of the ovum or the mucous membrane of the uterus, and bring about a corresponding tendency to disorganisation and separation.

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* Read at a meeting of the Glasgow Obstetrical and Gynæcological Society, 25th January, 1893.

In order, however, to prevent the tendency to abort, we must classify the causation, and for practical purposes I am in the habit of adopting the following:—1, Traumatic; 2, mechanical; 3, neurotic; 4, toxæmic or hæmatic; 5, inflammatory.

1. Amongst the *traumatic causes* may be mentioned blows or falls, immoderate sexual intercourse, undue exercise, and *wilful exposure* (a by no means *small proportion*). These only require to be suggested and guarded against. However delicate the subject may be, it must be the experience of many members of this Society, the painful fact that many young ladies suffer from irreparable and grievous mischief of the uterus and its adnexæ through imprudence in the earlier months of marital life.

2. A frequent cause of abortion is a displacement of the body of the uterus. Again and again, in cases of retroflexion of the uterus I have averted the tendency to abort by the application of a well adjusted Hodge's pessary. In some cases where the displacement has existed for some time, there will coexist a certain amount of endometritis which it will be necessary to treat in addition to the adjustment of the uterus. Tumours and adhesions of the uterus fall to be mentioned under the mechanical causes, but these will fall more for treatment into the hands of the gynæcological surgeon.

3. There are no more troublesome cases to deal with than those enumerated under the neurotic class. These emaciated women, worrying themselves about, perhaps real, but very often imaginary evils, test every resource of the obstetric physician. After having, I believe, tried every nervine sedative and much vaunted specific astringents and sedatives, either in the *Pharmacopœia* or in the advertising columns of the medical journals, I am convinced that the only satisfactory method of treatment is *total isolation*, *absolute rest*, and *careful nursing*. Even with these, after you think you have guided them through and past the trying period, you come to grief on the rock of some domestic annoyance. You have a hurried summons, find a slight hæmorrhage with recurrent pains, and the inevitable follows. These women may be the most charming and amiable, the most cultivated and refined, and perfectly cognisant of the harm that will arise, but through an increased nerve tension, due, I believe, to some extent to the pregnant condition acting on a very sensitive

nervous organisation, they lose that healthy controlling influence which is necessary for the carrying to a satisfactory conclusion the highest of all womanly functions—*motherhood.*

Various nervous diseases will also act in a similar manner, such as epilepsy, chorea, &c.

4. The *toxæmic* or *hæmatic* causes are the most numerous of all, for in this category we must include all conditions which produce dycrásia of the blood, whether arising autogenetically, such as diabetes, cholæmia, albuminuria, anæmia, gout or rheumatism, &c., or those having a heterogenetic origin, such as the exanthemata, syphilis, or poisonous gases. The special causation under this class is syphilis. I have on several occasions, when at a loss to account for repeated early abortion, seen pregnancy follow after the administration of small doses of mercury continued for some time. I prefer in such cases to give mercury with chalk, the hydrarg. c. cretâ of the *British Pharmacopœia,* in doses of two grains, in the form of pill thrice daily. This preparation agrees with the most delicate stomach, is easily taken, and its course is not apt to be interfered with by diarrhœa. Of course, with this, as with all other mercuric preparations, its action must be carefully watched, and the dose diminished, or its administration stopped if mercurialisation should arise.

I had lately under my care a lady confined of a remarkably fine, healthy boy. This woman had aborted very frequently, and had been under the most eminent gynæcologists: she had tried rest and every specific anti-abortive remedy. When I examined there was no visible uterine cause, but on the knee there was a small, harmless-looking ulcer which, she said, "had existed for years," not giving rise to any inconvenience, but never totally disappearing A slight coppery tinge aroused my suspicions, and decided my treatment. Two grains of grey powder were given three times daily, and the lotio-nigra was applied to the ulcer. In about the course of a month the ulcer was completely healed. In six months she was pregnant, and was confined at the full time. The drug was continued in small doses during the whole course of pregnancy.

The other causes under this head suggest their appropriate treatment. In dycrasia arising from a close, vitiated atmosphere, or non-hygienic room, a complete change of air may be necessary; if the patient suffers from anæmia as well, iron or the chalybeate spas will suggest themselves, or the alkaline or sulphuretted waters in gout or rheumatism.

Whilst the causes mentioned are very frequent factors in the production of abortion, a most common causation in my practice is an inflamed condition of the cervix or the mucous membrane of the body of the uterus; and whilst the preceding causes may be treated by the general practitioner, some special knowledge of gynæcology is necessary for the proper management of the latter.

We are told by some eminent authorities that even during pregnancy, we should treat an inflamed cervix by direct applications as in the non-pregnant state, but this, I think, is not often possible nor practicable—not possible because the symptoms of endocervicitis will not be so pronounced as to cause the patient to seek advice, and not practicable, inasmuch as I believe the vaginal examinations and applications would be very apt to excite reflex action, and bring about the condition we were endeavouring to avert. It is generally my experience to discover these morbid conditions when in attendance after abortion, and on investigation into its causation, and then the treatment falls under that of endocervicitis or endometritis, and therefore outwith the scope of this paper.

On being summoned to a case, in the earlier months of pregnancy, with uterine pain and hæmorrhage, our great object is to arrest the tendency to abort; and if the case has been of traumatic origin, we may, with rest and small repeated doses of opium, accomplish our end, but in the majority of cases we will fail. The constitutional or local cause which gave rise to the symptoms will conclude the mischief, and, paradoxical though it may sound, it is subsequent to the abortion that our prophylactic measures begin.

I am not aware if every one has had the same trouble and anxiety in the management of cases of abortion, but I confess in the earlier years of practice to have had much concern and many misgivings in the treatment of such cases. We were told to press upon the fundus with one hand, and with the finger of the other to penetrate the cavity of the uterus, and scoop out the ovum and its membranes. Now, this is just the thing we *cannot* do; we may reach, and we may be able to sweep around the protruding part, but to effectually scoop it out is what we very seldom can accomplish. Ovum forceps are also recommended, but in my hands are total failures. By any of these manœuvres we simply burst the sac, the ovum escapes, the membranes are retained, and the troublesome *rôle* of abortion, with retention of membranes, takes up its course.

With recurrent pain, slight hæmorrhage, and a patent os abortion is inevitable, and the most clamant procedure is to *empty the uterus*. This can be most readily accomplished by the use of the kite tampon. Pieces of absorbent cotton, fastened to a string, about 12 inches apart, are squeezed out of a 1 to 3000 solution of bichloride of mercury, and packed through a speculum well into the vagina. On removal of these in from 12 to 24 hours, the contents of the uterus will, as a rule, be found to follow; if not, repack and wait as before. In this way I seldom fail to obtain the ovum and membranes *en bloc*, similar to the specimens I now exhibit.

The process of packing I think produces rapid maceration, softening, and consequently easy separation of the decidua from the uterine wall. The subsequent douching with a hot mercuric solution, 1 to 4000, at a temperature of 110° F., with small doses of ergot internally to assist involution, completes the treatment.

I am never satisfied in the treatment of abortion unless I obtain the ovum and membranes intact.

In many cases, in anxiety to clear the uterus by the finger, the membranes are ruptured and retained, or the case may be in this stage when seen; or after the history of an abortion persistent hæmorrhage may be the impending danger, or a fœtid discharge continues. In the face of such conditions, I consider the only efficacious plan is *dilatation* and *curettage.*

I remember a statement I made being called in question at a former meeting of this Society. I was advocating the emptying of the uterus in some forms of puerperal convulsions, and stated that *I had never found much difficulty in dilating the os, either in the pregnant or the non-pregnant condition.* In reasserting this statement, I now show Smith's dilators, which I have most frequently used and prefer. These metallic bougies are graduated from the size of an ordinary sound up to the calibre of the finger, which is quite sufficient for the free admission of the curette.

The method of curetting is, I daresay, familiar to you all, but it may not be out of place to briefly recapitulate the method I adopt. The patient is placed under chlorform in the lithotomy position, the fourchette depressed with a retractor, and the uterus drawn well down by the vulsellum forceps, is dilated, a blunt fenestrated curette is introduced into the fundus, and passed firmly and thoroughly over the entire surface of the uterine cavity.

Volkmann's surgical spoon may be substituted for the curette, but it is, in my opinion, too sharp.

During curettage I allow an antiseptic solution placed overhead to play upon the parts, and when the operation is finished I wash out, through a double channel canula, the uterine cavity, mop the endometrium with a solution of perchloride of iron, which prevents any tendency to hæmorrhage, then clear away all clots and *débris* by again freely washing, insert a small strip of iodoform gauze into the uterine cavity, and pack the vagina with the same material.

In twenty-four hours the dressings are removed, and the hot antiseptic douching is continued night and morning for a few days.

By this method you not only remove and cure the approximate mischief, but if the case has been an inflammatory one, you completely avert the subsequent tendency to abort.

CURRENT TOPICS.

Closing of the Winter Session.—The Winter Session at the various medical schools in the city came to an end on Friday, 24th March last. As a general rule, the numbers of students in attendance have not been quite so high as in recent years; the addition of a fifth year of study may have something to do with this.

Glasgow Royal Infirmary.—We have been informed that a memorial, signed by ten out of the twelve members of the visiting staff, has been presented to the Managers praying them to return to the old arrangement whereby both physicians and surgeons visited their wards at 9 A.M. In 1889, this was altered so that the surgical visit was made at 9 A.M. and the medical at 10 A.M. The object of the alteration was to allow students to attend both medical and surgical wards at the same time. This strongly signed memorial shows that the new arrangement has not been satisfactory either for the teaching of the students or the interests of the patients, and we quite agree with the reasons advanced in support of this opinion. The question of the provision of dispensary practice for female students has also occupied the serious consideration of the Managers. The matter is one beset with many, but by no means insuperable difficulties, and, in order to give the fullest consideration to every interest, the Managers appointed a Committee of Inquiry to take evidence on the matter. The general tenor of the evidence submitted, we understand, was to the effect that it was possible, with the enormous resources of the Glasgow Royal Infirmary and the accommodation at the dispensary, to make arrangements for the separate clinical instruction of women in the dispensary. The result of the deliberations of the Managers on the subject has not yet been made known, but we believe that a scheme has been formulated whereby women can receive their dispensary practice in the Royal Infirmary. This is as it should be, and shows that the Managers of the Glasgow Royal Infirmary are keeping well abreast of the developments of medical education.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—The Seventh Ordinary Meeting of the Society will be held in the Faculty Hall, 242 St. Vincent Street, on Monday, the 10th inst., at 8 o'clock, when the following cases and specimens will be shown:—By *Dr. Eben. Duncan*—(1) specimen of an unusually large tumour of the brain from a case in which extensive trephining had been performed; (2) specimen of a heart with endocarditis of both auriculo-ventricular valves, and embolism of the femoral artery, from the case of a young girl. By *Dr. Brown Kelly*—a case of mycosis of the pharynx and tonsils in a young woman. By *Dr. Finlayson*—specimens of the ova of bilharzia hæmatobia from a case of hæmaturia. By *Dr. Donald Macphail*—a child with an enlarged spleen, shown at the Society about a year ago.

THE GINDERS FUND.—The following sums have been received (up to 7th March) in response to the appeal made on behalf of the widow of the late A. Gerard Ginders, L.R.C.P. Ed., who went down in the ill-fated *Roumania*:—

Donations, ...	£60	0	0
Lancet Fund, ...	25	0	0
British Medical Benevolent Fund, . . .	10	0	0
Total, ...	£95	0	0

The Committee consider the sum inadequate for the purpose they have in view—viz., the furnishing a house for Mrs. Ginders to let lodgings—and would earnestly appeal for further contributions. Remittances to be sent to Dr. Quintin M'Lennan, 191 Pitt Street, Glasgow.

THE CHICAGO EXHIBITION—THE INTERNATIONAL CONGRESS OF CHARITIES, CORRECTION, AND PHILANTHROPY, 12TH TO 18TH JUNE, 1893.—Any of our readers who may intend to visit the World's Fair during the summer may be interested to know of this Congress, Section III of which is specially interesting to medical men. We print the circular showing the work to be done in this Section; other Sections deal with pauperism, neglected children, crime, sociology, &c.:—

"*Section III—On the Hospital Care of the Sick, the Training of Nurses, Dispensary Work, and First Aid to the Injured.*

"One of the series of International Congresses to be held in Chicago in 1893 is to be devoted to the subjects of Charities, Correction, and Philanthropy, and the Third Section of this is to consider all matters relating to the hospital care of the sick, the training of nurses, dispensary work, and first aid to the injured. The Committee of Organisation of the Congress has appointed Dr. John S. Billings, Surgeon U. S. Army, as Chairman of this Section, and Dr. Henry M. Hurd, Superintendent of the Johns Hopkins Hospital in Baltimore, as its Secretary, and has authorised and requested them to complete its organisation, to extend invitations, and to prepare a programme for its work. Miss Isabel A. Hampton, Superintendent of the Training School for Nurses of the Johns Hopkins Hospital, has been appointed Chairman of that part of the work of the Section which relates to the training of nurses.

"This Section will hold five sectional meetings of about two hours each, commencing 12th June, 1893, and will also have charge of one of the general sessions of the Congress—viz., that held on the morning of 14th June.

"It is desired that this shall be a truly international gathering for conference on the subjects allotted to this Section, and all who are interested in hospitals, in training of nurses, in dispensaries, or in first aid to the injured, are cordially invited to be present, to contribute papers, and to take part in the discussions.

"The papers and proceedings will probably be printed as a separate volume, and it is hoped that this will represent the best methods and the best work in each of these departments in all parts of the world.

"The following are suggested as subjects for special consideration in papers to be prepared:—

"1. Hospital organisation—governing bodies—relations of the medical staff and of nurses' training schools.

"2. Hospital finances—means of support—mode of keeping accounts—cost.

"3. Plan and construction of recently built general hospitals, embodying the latest improvements.

"4. Relations of hospitals to increase of knowledge, to medical education, and to the medical profession—hospital records, statistics, and reports.

"5. Pay patients in hospitals.

"6. Isolating wards and hospitals for contagious diseases.

"7. Hospital diets, dietaries, kitchens, &c.

"8. Hospital amphitheatres and operating rooms.

"9. Hospital laundries and disinfecting establishments.

"10. Army and navy hospitals—emergency hospitals in time of epidemics—temporary and movable hospitals.

"11. Small and special hospitals, cottage hospitals, school hospitals, private hospitals, sanatoriums, &c.—convalescent hospitals, and what to do with incurables.

"12. History and present condition of hospitals in the large cities.

"13. Training schools for nurses.

"14. Dispensaries, relations to the public and to the medical profession—dispensary records.

"15. First aid to the injured—associations for best means of popular instruction in, and its place in general education.

"Persons desiring to present papers, or to share in the discussions of this Section, are requested to communicate with the Secretary at once The period of time allotted for the preparation of the programme is necessarily brief, and it is essential that all who are willing to assist in this work should act promptly."

All communications should be addressed to Dr. Henry M. Hurd, The Johns Hopkins Hospital, Baltimore, Md.

NEW PREPARATIONS, FOODS, DRUGS, &C.—*The Liquor Carnis Company* have been doing all in their power to perfect the preparation which has become well known to the profession and the public as Caffyn's Liquor Carnis. They have acquired property in the Vale of Aylesbury, in Buckinghamshire, where cattle can be obtained fresh from the fields, and where their factory is placed amid surroundings that are healthful and open. We have received a specimen of the perfected product, and from personal experience we can say that it forms a delightful Concentrated Extract of Beef. The taste, which at first was objectionable, has now, by the use of flavourants, been made exceedingly pleasant. The preparation can be put up in imperial pints, thus effecting economy in supply; and we are informed that exposure to air does not affect its value. We have pleasure in recommending our readers to give the preparation a trial, and we would also call attention to another very useful invalid's food prepared by the same company, which they designate Caffyn's Malto-Carnis.

Messrs. Burroughs, Wellcome & Co., send us a number of new drugs, among which the following may be mentioned:—

Agathin, a new anti-neuralgic, is said to have been very useful in the treatment of intractable cases of sciatica in the Municipal Hospital of Frankfort. It is also reputed to have been of service in rheumatic affections, and the dose is 4 to 8 grains 3 times daily.

Dermatol Dusting Powder is introduced as a most appropriate application in all cases of moist or irritable conditions of the skin, such as blisters, chapping, redness, chaffing, or abrasions. We are informed that it can be freely used for children and general nursery purposes, as it is entirely free from toxic or injurious ingredients.

Myxœdema and its treatment are at present attracting much attention in professional circles, and it may interest our readers to know that Messrs. Burroughs, Wellcome & Co., have prepared "Thyroid Gland Tabloids," which seem to us to be a very convenient way of administering the gland. The following is the account which the firm have sent us of the mode of preparation of the "Tabloids," and we leave our readers to judge of the efficacy of the preparation for themselves:—

"The glands are received by us three hours after the death of the sheep. They are supplied, at our special request, attached to a piece of the trachea, from which they are carefully dissected and thinly sliced, to discover whether any cysts or other morbid processes exist. They are then carefully dried *in vacuo* at a low temperature, and are pulverised and compressed together with a little common salt into 'Tabloids.' Each 'Tabloid' represents 5 grains of the fresh lobe, and they may be swallowed entire with a draught of fluid or be administered in soup or other food. The physicians who have used the 'Tabloids' inform us that they are quite as beneficial as the fresh glands, and may be more regularly and easily administered. We have consulted several well known professors of physiology, and they tell us that, as the active substance may be either ferments, globulious, or albumoses, until this point is definitely settled, it is better to use the entire glandular substance."

REVIEWS.

A Treatise on Gynœcology, Clinical and Operative. By S. Pozzi, M.D., Professor in the Faculty of Medicine, Paris: Surgeon to the Lourcine-Pascal Hospital. Vol. I. London: The New Sydenham Society. 1892.

The medical visitor to Paris will naturally go to the Salpêtrière to hear and see Charcot give one of his brilliant, if not convincing, demonstrations. As naturally he will betake himself from the Salpêtrière to the Institut Pasteur, to admire, if only from a distance, the busy hive of investigators working there. On his way from the Hospital to the Institut, along the Boulevard Arago, he will probably pass without notice an old crumbling wall enclosing buildings that look like wooden cattle-sheds. Yet, in these mean buildings, behind this crumbling plastered wall, has been carried on for many years a work which, in its own way, is not less excellent than that of either Salpêtrière or Institut. For the cattle-sheds are the Lourcine Hospital, and in one corner of the enclosure are the gynæcological wards of Professor Pozzi. When you enter these, and feel the electric presence of the man and his assistants, you forget the mean surroundings, the unkept walks, the crazy doors, and the loud-voiced beldame who guards the entrance—you feel at once that you are in an atmosphere permeated by a healthy, active, searching intelligence, and a happy, kindly spirit, and in the presence of the Professor himself you have no doubt of the source of that influence.

We do not know where Pozzi was born, but he impresses us as representing the best Parisian type. Neat in dress, faultless in cut of hair and beard, quick in speech and movement, he combines rapidity of insight and dexterity of hand with wide and accurate knowledge, and in his welcome of a *confrère* he is, of course, effusive.

The book, of the translation of which we have here the first volume from the Sydenham Society, has had an immediate and great success. The first edition was published in August, 1890, and was exhausted in six months. The second edition, "revised, corrected, and enlarged," appeared in 1892, and it is from this edition that the translation is made.

Covering the wide field of gynæcology, the treatise almost uniformly reaches the highest standard that such a work can reach. It is clear in exposition; it does not deal in vague generalities, like so many of our English text-books; it gives with firmness, and yet with modesty, the author's own conclusions, while on all important points it affords a full review of the opinions of others; it is thoroughly imbued with modern ideas and with the modern spirit. Yet one has the feeling that the author does not give up any of the well established principles of surgery for the sake of novelty.

The treatise is divided into sixteen books, of which the first four are translated in this volume. These are—I, On Antisepsis, Anaesthesia, Modes of procuring Union and arresting Bleeding; Drainage and Plugging; II, On Gynæcological Examination; III, On Metritis; IV, On Fibromata of the Uterus. Each subject is treated very fully, and copious references are given to the most recent literature. Among these we are gratified to observe that Pozzi has not omitted papers to be found in the *Glasgow Medical Journal.* On the subject of the author's acquaintance with foreign works, it is amusing to remember the lecture Péan administered to Pozzi at the Berlin Congress on his running after foreign teachers instead of learning gynæcology in Paris, from Péan himself!

With regard to the English form in which the book is here put before us, we exceedingly regret that it has been produced with so much haste, and with evidently so little careful superintendence. The translation is not always correct, is sometimes absolutely wrong, and the Queen's English is frequently rather hardly treated. If anything we say could affect the management of the Sydenham Society, we would urge them to subject the future volumes of this valuable work to a very thorough revision of the text by a competent French scholar before issuing them to the public. And revision would be not less necessary with respect to the illustrations. Some of those in this volume are little better than blotches, especially the series illustrative of lacerations of the cervix. (Figs. 109, 110, A, B, C; 111, A, B; 112, A, B,).

In spite of all its imperfections, however, we expect that this book, in its completed form, will prove the best treatise on gynæcology that has yet been presented to the English reader.

Annals of Surgery. Vol. XVII, Part I. Cassell & Co., London, Paris, and Melbourne; and the University of Pennsylvania Press.

THE issue of this, the opening number of a new and enlarged series of the above periodical, we regard as an important occurrence in the surgical literary world. The *Annals of Surgery* has already a high and well-founded reputation, and the "Index of Surgical Progress," forming a feature of the present number, is alone sufficient to give the journal very considerable value in the eyes of English-speaking surgeons who may happen not to have the necessary time or opportunity to read the Continental periodicals from which its paragraphs are mainly culled. The original and editorial articles, too, contain matter of high practical and scientific value; and, indeed, we think it only requires perusal to demonstrate to any surgeon who aspires to keeping abreast of the advance of surgical knowledge that he cannot afford to ignore the journal.

Having thus expressed our high appreciation of its aims and matter, we feel bound to record an emphatic protest against the slovenly manner in which this journal, of the first rank in its line, has been issued to the profession. The paper and type are excellent, but errors in punctuation, composition, and spelling meet one in every article. Many of these are clearly the work of the compositor, and include the frequent omission and misplacement of letters, words, and punctuation points. Of similar origin, obviously, are the instances met with of substitution of words of similar appearance for those evidently intended—*e.g.*,"duration" for direction, "opened" for found, amongst others, and such complete confusion of both word and sense as occurs in the sentence at the end of the first paragraph on page 108. To feel confident of having gauged the paternity of many of the remaining curiosities of composition and spelling would be difficult. In the present issue the writers are, without exception, American, and, therefore, we are prepared to receive without comment, as the deliberate productions of the authors, many of the curious idioms and examples of orthography more or less familiar to us in American literature generally; but, in the face of the high merit of most of the articles, we hardly know whether we shall be right in crediting American literary usage with *all* the curiosities to be found in this periodical. A few examples from among many we subjoin—"naval" (umbilicus), "albuminurea," "born" (borne), "fulfill," "skillfully," "tamponade," "dullness," "thralldom," "fullness," "cliental" (clientele), &c.

The present number includes original articles on Amputations at the Hip-joint, the Radical Cure of Hernia, Treatment of Flat-foot, Arterio-venous Aneurism, Expert Examination in Railway Cases, and Obturator Hernia; and editorial articles on the Surgery of the Hypertrophied Prostate, Asepsis in Laparotomy, and Cranio-cerebral Topography, with a report of the proceedings at the November Meeting of the New York Surgical Society, and an Index of Surgical Progress of a comprehensive character, finishing with a review of several recent surgical works.

One anomaly we should greatly desire to see rectified. The periodical is much read and appreciated in Great Britain, and two of its four editors are British. Is it too much to expect to see at least a portion of its space devoted to the productions of British writers?

How to Give Gas, with a detailed Description of the Apparatus Employed. By T. E. CONSTANT, M.R.C.S., L.D.S. London: J. P. Segg & Co.

OF the making of books there is said to be no end, and although the above is but a pamphlet, it is not altogether easy to see the end or object of the writer, the work being too superficial to be of any real service. As others have done before him, the author complains of the want of instruction in "the various medical schools for imparting to the students knowledge of anæsthetics in general use"—a state of things which, if prevalent in the London schools, is far otherwise in less favoured seats of learning. As Mr. Constant says himself, certain details of administration are much more easily learned in actual practice than from a theoretic discourse, and after reading his hurried description of the apparatus commonly employed, the novice need not despair, should he follow it, of being able to solve "the wheels within wheels" of Ezekiel.

Conversation to the patient during the earlier stages of administration should, in our view, be discouraged, except under rare conditions; we have more than once seen the patient believe that a question as to his comfort had been asked him, and removal of both face-piece and gag followed.

A well-timed note of warning is given as to the extreme ease with which young children are brought under the influence of nitrous oxide, though we have never seen half a dozen respirations suffice for all that may be necessary. Considering how well and easily children are anæsthetised by chloroform, it is perhaps worthy of consideration, whether for them this is not often the better reagent to use, nitrous oxide being probably less satisfactory with them than with any other class of patients.

As regards the suitability of "gas" in cardiac cases, we think the danger of "shock" from extraction without anæsthetic is greater, as the author points out, than any risk that can be laid to the charge of the anæsthetic itself, though Mr. Constant might, we think, have had a word of warning regarding its use in cases of chronic Bright's disease, the administration being followed at times by an acute attack, or by an increase of unfavourable symptoms.

The dental surgeon, while perhaps not gaining much information, ought to thank the author for giving expression to the state of ignorance in which the average medical man remains regarding an agent in which at times he would find a most useful and safe servant. Again and again have we heard the dentist complain of the anæsthetist being an additional care instead of a help, and under these circumstances he must be excused if he seem to take the law very much into his own hands.

Mental Nursing, or Lectures for Asylum Attendants. By WILLIAM HARDING, M.B. London: The Scientific Press, Limited.

SEVERAL handbooks for attendants on the insane are already in existence, but if the status of those engaged in mental nursing is to be influenced by such books, we cordially say that there is room for many more.

The first lectures deal with elementary Anatomy and Physiology, but it is presumed that the author does not regard the scanty information there given as sufficient foundation on which to build a nurse's knowledge of disordered mental or physical function. For it will be allowed that a nurse's training must be from the general to the special, and a knowledge of general nursing in detail must precede a period of training in a specialty. In insanity this is especially the case, many cases of mental disorder being primarily due to disordered bodily functions.

The other lectures deal with such subjects as the Food of the Insane and Methods of Feeding; the General Management of the Insane; Entertainments; Duties of the Charge-nurse, of the Night-nurse, &c.

The last chapter is given up to the Sick Room, and is very brief, and of necessity very imperfect. Nothing is said about the taking of a patient's temperature, nor is there any mention of the way in which poultices, fomentations, &c., should be made or applied. It may be that the author does not include these under the term "mental nursing."

Many of the practical hints are, however, of value, and the book is written in a clear, easily understood style.

The publication of handbooks for those engaged in mental nursing is a sign of the times. The training of hospital nurses has vastly improved their status, and has made them of much greater service to the physician. Now, but very slowly, are similar facilities for training being provided for asylum nurses, and nothing will assist more effectually in dispelling the prejudice that exists against asylums than a better education of their nursing staff, a proof that the asylums are hospitals, not refuges, and the staff nurses, not keepers.

As a contribution towards this end this book is worthy of notice.

Reform in the Treatment of the Insane with the Early History of The Retreat, York. By DR. HACK TUKE.

THE compilation of a *Dictionary of Psychological Medicine* does not seem to have exhausted Dr. Tuke's energies, and here we have fresh evidences of his literary skill and untiring industry.

The book is divided into two parts, the first part being a history of the early days of The Retreat Asylum at York—the mecca of the asylum physician—with glimpses into the character and lives of the men who founded it; and the second part being a report of the proceedings at the annual meeting of the Medico-Psychological Association held at The Retreat in 1892.

The first part is the more interesting, and is most suggestive reading. Its perusal would do much to stir up more interest in the events of the Reformation era in the treatment of the insane, an interest which at present is inconceivably languid even among professional men when it is considered that one in three hundred of the population are or have been insane.

The contrast Dr. Tuke draws between the treatment now and the treatment at the time of the founding of The Retreat, where the insane literally lay in cells, bound in affliction and iron, is graphic and powerful.

We congratulate Dr. Tuke on this little book, both in respect of what he himself has written, and as containing in its latter part the tributes of psychologists of all countries to the noble work done against the most strenuous opposition by those whose name he bears, and whose descendant he is.

The More Severe Forms of Lateral Curvature of the Spine. By NOBLE SMITH, F.R.C.S., Ed. London: Smith, Elder & Co. 1892.

IN this little work, the author's aim is to emphasise several points in connection with the pathology and treatment of advanced lateral curvature. Though not quite prepared to follow him into all his positions, we certainly think his views are, in the main, well founded, and well worth the attention of practical surgeons.

The points he draws attention to are (*a*) the occurrence, in the advanced stages of lateral curvature, of very distinct bony spinal deformity, rendering the curve a fixed one; (*b*) the impossibility of removing this bony deformity by any system of mere muscular gymnastics, such as the so-called "Swedish Movement Cure"; (*c*) the necessity of preventing further curving by the application of mechanical support; (*d*) the disadvantages of poroplastic and plaster jackets as supports on account of their confining the chest, and applying pressure where it is injurious as well as where it may be beneficial; (*e*) the advantages of supports of steel with leather pads, exercising pressure only where it is desirable, and not interfering with the free play of the chest and the practice of any gymnastic exercises thought best; (*f*) the necessity for further simplification of such apparatus by the omission of joints, the necessity for their introduction being obviated by the employment of soft steel, which can be bent by wrenches, in the construction of the apparatus.

An Introduction to Modern Therapeutics, being the Croonian Lectures, June, 1889. By T. LAUDER BRUNTON, M.D., F.R.S. London: Macmillan & Co. 1892.

THE four lectures which this book contains were delivered by Dr. Brunton to the Royal College of Physicians of London in June, 1889. As they have already appeared in the ordinary medical journals, we may presume that most of our readers are more or less familiar with them. Many, we are sure, will be pleased to have them in this handy and readily accessible form. They may be described as an attempt to place the administration of medicines upon a scientific basis, and, in this attempt, the chemical structure of remedies and their physiological actions are dealt with in a most complete and interesting manner. It is certainly cheering to find that so competent and experienced an observer holds the most lively faith in the remedial powers of medicines, and in the progress to be anticipated in the science and art of therapeutics. A special feature of interest in the lectures is the frequency with which the most advanced chemical and physiological observations and experiments are shown to lead to practical developments bearing on the treatment and prevention of disease. The lectures are written in Dr. Brunton's usual lucid style, and display his well known fertility and aptness of illustration. The book is a necessity for all interested in the progress of therapeutics.

The Hygiene of the Ear. By DR. VINCENZO COZZOLINO. Translated from the Fifth Italian Edition by JAMES ERSKINE, M.A., M.B. London: Baillière, Tindall & Cox.

THE author, in this essay of four short chapters, touches on a great variety of conditions which may affect the ear, interfere with its function as an organ of hearing, or which may lead on to serious structural changes. The dangers associated with various popular forms of treatment—dropping oil into the ear, the indiscriminate introduction of cotton-wool, the use of ear-picks, ear-cleaners, and the like — are dwelt upon and explained; and the effects of certain drugs, especially quinine, and the salicylates, are discussed. In the list of contents, by "stupidity in school children mistaken for dulness in hearing," the reverse is meant. What the author desires to draw attention to is the fact that a child suffering from dulness in hearing is too often looked upon as stupid, lazy, or inattentive, and punished, in place of having his hearing-apparatus examined and the defect removed.

The pamphlet contains nothing new, and adds nothing to our knowledge of otology. But its teaching is that of educated commonsense, and the facts are explained by one with a full knowledge of his subject, and so its perusal can be recommended. The information is conveyed in a very readable form, and the translation is excellent.

On Sledge and Horseback to Outcast Siberian Lepers. By KATE MARSDEN. London: The Record Press, Limited.

FROM 1827 to 1860, the officials of the districts of Siberia where leprosy prevails, constantly petitioned the Government to erect an hospital for the benefit of the sufferers. In 1860 their request at last received attention, and a small hospital was built. It was closed three years afterwards from lack of funds. Since that time no public effort has been made to relieve the lepers, for whom no special hospital exists. It was reserved for an Englishwoman to awaken Russian sympathy in their behalf. That, in spite of Miss Marsden's attempted extenuation, is perhaps the most remarkable fact in a very remarkable book. It is with no desire to depreciate her heroism and her enthusiasm in the cause to which she has devoted herself that we say, as Miss Marsden herself admits, that she is evidently a very nervous woman—one to whom the circumstances of her arduous journey and the destitute condition of the lepers would especially appeal.

The circuit of Viluisk, a department of the province of Yakutsk, extends over about 559,000 square miles, and is divided into four departments, in one of which, the Sredni Viluisk, the headquarters of Siberian leprosy are to be found. In the Viluisk circuit, with a population of 70,000, there is but one doctor. It follows that the diagnosis of leprosy is frequently made without a medical opinion, and the attainted person is driven to live in the forests apart from man. Miss Marsden cites one case where this state of things resulted in crime. The details which she gives of the wretched existence of the lepers, driven from the community, and living like beasts in the forests and marshes, scantily clad, and suffering the utmost extremities of heat and cold, are sufficient to arouse compassion and indignation in the minds of European readers. But it must in justice be added that the report of the medical inspector of the district states that in one or two villages these unfortunate beings are better cared for. From this report, and from Miss Marsden's figures, it would seem that the total number of lepers at present in the district may amount to about 120, including those who are not officially notified. For their relief she proposes to establish a colony, consisting of ten houses, each to accommodate ten inmates; two hospitals (one for either sex), doctors' and nurses' accommodation, &c. For the buildings alone it is stated that a sum of £9,000 is required, besides additional funds for their maintenance and the treatment of the patients. To relieve the altogether exceptional suffering which the lepers undergo amid the half-civilised and superstitious population of Yakutsk, and to minimise the risk of propagation of the disease, this sum would not appear to be excessive. One is surprised, indeed, that it should be necessary to look beyond Russia for contributions to the fund. The object is worthy to evoke the charity of citizens of any nationality, but it would be unfortunate should their sympathy induce them to forget the still stronger claims exerted upon them by disease and poverty in their own country.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1892-93.

Meeting VII.—3rd February, 1893.

Obstetrical Section.

The President, Dr. Joseph Coats, *in the Chair.*

DISCUSSION ON PUERPERAL SEPTICÆMIA.

The President intimated that Dr. R. M. Buchanan's paper, already published in this *Journal* (*cf.* vol. ii, 1892, pp. 429 and 450), had been chosen as a basis for discussion, and briefly indicated the lines upon which he considered the discussion should proceed.

Dr. W. L. Reid understood Dr. Buchanan's position to be, that he believed that most cases of raised temperature—or "fever"—seen after childbirth, and accompanied by more or less serious symptoms, were caused by the streptococcus pyogenes, and that that micro-organism might be introduced from without, or from a diseased Fallopian tube, or even from the normal mucous membrane of the vagina. In regard to the two latter situations, Dr. Reid considered that the bulk of clinical evidence was against its origin there. It was notorious that in maternity hospitals and in private practice, where physicians did not use douches in normal labour, but had their hands cleaned with antiseptics, that puerperal fever was uncommon—in point of fact, where great external cleanliness was used, it was very uncommon. Even amongst patients living in very dirty houses, if there was little manipulation in connection with labour, puerperal fever was uncommon; on the other hand, when there was a good deal of manipulation (*e.g.*, when students made a great many examinations, and there was thus much chance of introduction of matter from without), then fever was common. The last-mentioned fact, Dr. Reid said, might perhaps be thought to cut in the opposite direction, and to indicate that the streptococcus pyogenes, present in the lower parts of the passage, was carried inwards by the manipulations; but if the micro-organism were really capable of introduction thus, there would be risk of its getting in in any labour. He would dread the result in any case in which he was conscious of having himself introduced any foreign matter into even the lowest part of the vagina.

Referring to the possible origin of infection from a diseased Fallopian tube, that, Dr. Reid thought, must be at least very uncommon, and would imply a salpingitis arising during pregnancy; otherwise a salpingitis would have been associated with a chronic endometritis, and then one would not expect a pregnancy to occur. Supposing a salpingitis to arise during pregnancy, it was quite legitimate to suppose that in connection with the strain of parturition some opening might be formed by which the germs from the diseased tube would gain access to the uterus.

Dr. Reid's own belief was that puerperal septicæmia was caused by septic infection from without, and that what was peculiar to it in a lying-in woman was due to her hydræmic condition, and to the further change in her blood-condition, brought about by the throwing into the circulation of the products of the muscular tissue which had been used up, as a result, perhaps, of a severe labour, and also by the throwing in of the excrementitious matter supplied by involution beginning within a few hours of delivery. Her blood thus formed a good soil for the spread of septic matter, and, if once introduced, it did spread with results which all recognised as of terrible fatality.

Dr. Halliday Croom (of Edinburgh) thanked the Society for the permission to be present and to take part in the discussion. He had been struck with the title of Dr. Buchanan's paper: it was on "*A* Case of Puerperal Fever;" whereas, thirty years or so ago, one would have expected to read of "a group of cases," or an "outbreak," or an "epidemic." A great change had occurred in the interval in regard to this disease. What had been the cause of the change would, no doubt, become clear as the discussion advanced. Dr. Buchanan's case seemed to him to have been one of pyo-salpinx, and such cases had a special history so far as pregnancy and labour were concerned. Pyo-salpinx was often bilateral, and thus pregnancy was unlikely; while, even though pregnancy did occur in a uterus attached to a pyo-salpinx, there was usually an abortion, as occurred in a case which he recollected having had to operate on. If a pregnancy (with pyo-salpinx) went on and reached full term, then in connection with labour they would expect to have the pyo-salpinx rupturing, either through the wall of the tube, or through its distal end, and in either case there would be an outpouring of septic pus into the abdominal cavity, with acute peritonitis and death within a day or two. Dr. Buchanan's case had not run such a course, but there seemed to have been a discharge of the contents of the tube into the uterine cavity, where they came into contact with the diseased surface at the site of the placenta, and thus brought about a sapræmia or poisoning in separate doses. Another possible explanation in the present case was that the pus had penetrated into the lower part of the broad ligament, and there gained access to the blood. On either explanation, such an ending of a pyo-salpinx after labour, without rupture, as had occurred in this case, was new and, he thought, hitherto undescribed.

As to treatment, Dr. Croom raised the question as to whether anything could have been done for the patient in Dr. Buchanan's case. The clinical history supplied in the paper was not very full, but it seemed to him (Dr. Croom), in view of the facts revealed at the *post-mortem*, that, at the stage at which she came under observation, treatment, either surgical or medical, would have been hopeless. When a pyo-salpinx ruptured into the abdominal cavity, there was no doubt as to what should be done: one should cut down and remove it, just as in extra-uterine pregnancy. That such a course might be successful was well recognised. He recorded a case in which he had operated, and obtained a recovery which was satisfactory, though protracted.

Proceeding to the general subject of the present position of puerperal fever, Dr. Croom first discussed the point as to whether puerperal fever could be communicated or developed from scarlet fever, or from any other zymotic disease. He agreed with those who thought that scarlet fever, small-pox, &c., have nothing to do with causing puerperal fever. When a puerperal woman came in contact with those diseases, she took them and not puerperal fever. This was borne out by the history recently published of an outbreak of scarlet fever in a London lying-in hospital, and it had also been evident during the small-pox epidemic of 1870. Puerperal fever was obviously a wound-fever developed by a micro-organism entering the blood; whether it was a streptococcus or some other coccus, it was at any rate some micro-organism; there might even be different organisms at work in different cases. He did not believe in the sub-division into heterogenetic and autogenetic infection; even the present case could not have been autogenetic, because, supposing the pyo-salpinx to have been induced by a gonorrhœa, the infection must originally have come from without. The wounds by which the micro-organism could enter in puerperal cases were obvious; there was always a wound at the placental site; there were often wounds at the cervix, and in primiparæ at the fourchette. The source of the micro-organisms might be the nurse, the doctor, students, or instruments.

The next question raised was as to the varieties of puerperal fever. Dr. Croom recognised three—(*a*) the variety, improperly called autogenetic, in which a woman had some *débris* left in the uterus after confinement or after abortion; putrefactive germs gaining entrance set up the condition of sapræmia; (*b*) the form in which the coccus gained entrance into the blood directly—this was a rapid form, death occurring in a few days from septicæmia; (*c*) that in which there was phlebitis, and the micro-organisms came in contact with the thrombus; metastatic abscesses formed in the kidneys and elsewhere, and the condition arising was that known as pyæmia.

With regard to the treatment of puerperal fever, there could be no question, if the above pathology were accepted, that the proper course was to adopt preventive measures, as had been indicated by Dr. Reid. In presence of a well marked case of puerperal fever, one was often practically helpless, so that one's energies should be directed in the way of prevention. The wonderful diminution in the number of cases of puerperal fever was due to the introduction of antiseptics. In proof of this, Dr. Croom quoted from statistics published for Paris, Copenhagen, and Prague, and also referred to the experience of his own service in the Maternity Hospital in Edinburgh, where antiseptics had been at one time carried to the extent of delivering under the spray. After the introduction of antiseptics, he had had six years without a single septic death. In the larger hospitals there were always occurring little septic attacks, but the genuine wound-fever had almost disappeared. Another influence in the prevention of puerperal fever he considered to be the forceps. Delayed labour was one cause of puerperal fever. His rule, in hospital as well as private practice, was to allow no multipara to be in the second stage for more than three hours, and no primipara longer than four hours. He supposed he used forceps in over 70 per cent of his cases.

Supposing sepsis to have begun, there were one or two points which would be even then found useful in treatment.

If sapræmia were taking place from retained membranes which had become septic, antisepticism might here also do wonders. The patient's temperature and pulse might have risen, and the abdomen become tender, but if one, with or without dilatation, washed out the uterine cavity with antiseptic fluid, the result would be very striking. In America, and on the Continent, some thought the curette an important addition to the treatment for retained membranes (even at full term), but he had not himself, while using it after abortion, employed it in such circumstances. The rule of those who advocated it was to wash out the vagina, and, if that were not sufficient, to wash out the uterus, and if even that failed to bring about improvement, to curette.

Dr. Croom's feeling was that their hope as obstetricians lay in the use of antiseptics, and, secondly, in the early and careful use of the forceps.

Dr. Samuel Sloan had been much pleased with Dr. Buchanan's paper, with the conclusions of which he was in general agreement. He (Dr. Sloan) regarded everything in the way of morbid change in the puerperium as septic, and as showing an attempt on the part of nature to arrest the inroads of the microbe. Dr. Croom had spoken of sapræmia, which he (Dr. Sloan) had always looked upon as a condition in which the blood was unaffected, except by an irritant, resulting from the intra-uterine changes, and thus one had just to wash out the uterus to insure the patient's recovery. In pure septicæmia this was not the case. All admitted that antiseptics had done a great deal. Antisepticism, as understood in surgery, was impossible in connection with delivery. He had never gone the length of delivering under the antiseptic spray, but during part of his time at the Maternity Hospital it had been his rule that all the normal cases should have a vaginal douche night and morning, a eucalyptus pessary being introduced thereafter. A colleague—the late Dr. Hugh Millar—who did not order these precautions, had, however, had results as good as, if not better than, his own. He wished at present to speak of septicæmia from the point of view of prevention. He desired aseptic results, whether from much or from little antisepticism, and he believed that absolute asepticism was possible. For this they needed skilful midwifery and absolute cleanliness; and with regard to the first condition—good midwifery—he admitted with Dr. Croom that that often meant an early use of forceps, though his forceps cases did not number more than 15 per cent. Dr. Sloan, indeed, would go even further back, and thought that it was most important to attend to the patient's health, both bodily and mental, for weeks before confinement was expected, while he would insist, too, upon the necessity of feeding patients during labour. Like Dr. Reid, he deprecated frequent examinations, and, with regard to the third stage of labour, there should not be hurry, else the openings of the uterine sinuses did not become thoroughly closed. He would insist, also, on the necessity for the careful examination of the membranes; if these were not entire he would explore; but if chorion alone were adherent he would not scrape it off, but would keep its presence in mind in view of possible contingencies. He considered it also most important to remove all clots at the end of the third stage, and, as a matter of routine, he once or twice a day, during the puerperium, made manual compression of the uterus. He used vaginal douches after delivery only when complications arose and there was reason to fear sepsis. Antisepticism he understood as meaning cleanliness on the part of the patient, of the nurse, of the doctor, and of the surroundings. Details were given of his methods.

It was quite probable that microbes did exist in the normal mucous membrane of the vagina, but during labour it was likely that they would be expelled by the lubricating fluid, by the "show," by the liquor amnii, and by the child's head.

The preventive treatment of puerperal septicæmia in his view implied (1) making of the entrance of microbes next to impossible; (2) the avoidance of any soil suited to their growth; and (3) the increasing of the vital resistance of the patient.

Dr. Murdoch Cameron said that the question of puerperal fever was a puzzle to those who had anything to do with lying-in women. In private practice he had not seen any case, when the patient had been in his own hands, with a good nurse and no visitors. Forceps had much to do with the prevention, but also with causation of puerperal fever, because, if used too early, forceps might lacerate the perinæum, and give rise to sepsis in the form that one could trace in cellulitis. This was not the form of sepsis, however, which proved most serious. What the physician dreaded was the case in which temperature and pulse became raised without any discoverable local lesion, and without the patient having any trace of inflammatory attack when the abdomen was palpated, but suffering from headache and vomiting, her countenance by its ashy look warning the observer of her danger. In such a case there was no suppression of milk, and the lochial discharge was neither suppressed nor fœtid; in a few days the voice became quivering; then delirium set in, and finally the patient sank into a state of coma, in which she died. In cases of that type the *post-mortem* showed a low form of peritonitis, and the bowels were all adherent. Dr. Cameron was never afraid of any case if there were definite localising symptoms, because then he could open the abdomen and wash out with water of 110° F. He had had a case of pyo-salpinx with ovarian abscess, in which he had operated three weeks after delivery, and the patient made a good recovery.

There was no doubt that streptococci existed in the vagina; and if they were there, what about female nurses, Dr. Cameron asked, who attended patients even during menstruation or with menorrhagia, and might thus be a source of infection? Whenever there was a case of anything like puerperal fever, he always made up his mind that it was due to some outside cause, though the patient's low bodily health might act as a predisposing cause. The operation of a cause from outside was proved by the analysis of outbreaks in which the various cases of puerperal fever could be traced to a particular doctor and midwife.

Dr. Cameron believed in thorough cleanliness, both in private and hospital practice, though on account of the different class of patients it was not necessary to apply hospital rules in private; in hospital he ordered douching, not believing in the action which Dr. Sloan had attributed to the child's head. He had no doubt that the improper use of ergot had been to blame for a good many cases of septicæmia.

Dr. M'Lachlan (Dumbarton) said that he had been unfortunate enough to have had several cases of puerperal fever in his practice during the last seventeen or eighteen years, and he had thus been led to consider the question of the causation of the disease. In the earlier years of his practice he had had much to do with typhus fever and bad cases of scarlet fever, and then his mortality in midwifery had been high as compared with more recently. His own impression had been that one attending such fever cases was not likely to be successful in midwifery practice. He must differ from Dr. Croom on this point, for he believed that the zymotic diseases might give rise to puerperal fever, quoting in support of this a case in which a woman recently confined had slept with her children, who had measles, became fevered, and died.

Last year there had been an epidemic of puerperal fever in Dumbarton, in the practice of one of the other doctors, but Dr. M'Lachlan had seen several of the cases, and had been struck with the fact that there seemed to be at least three distinct types. (*A*) As an instance of the first type, there had been a primipara, delivered by instruments after a tedious labour; on the third day she had had a rigor, followed by fever, with vomiting, purging, tenderness of abdomen, occasional sweating, and a peculiar smell from the breath (like that of clothes which have lain long in a washing-house); patchy pneumonia had developed before death. (*B*) In the second type there had been headache and shivering on the second or third day, followed by profuse sweating, abdominal swelling, phlegmasia dolens, cessation of lochia and milk; in such cases recovery took place. (*C*) Erysipelas seemed in the third group to complicate the whole disease, and when it was so the result was always fatal.

Antisepticism was not carried out in Dumbarton as it seemed to be in Glasgow. He had attended about 2,000 cases of labour and never used antiseptics; forceps he used frequently, dipping first in boiling water, and lubricating without antiseptic ointments. He did not make frequent examinations, satisfying himself with making out the presentation, and then leaving to nature if all was satisfactory.

As illustrating the readiness with which infection might be carried, Dr. M'Lachlan related a case of his own in which he believed that he had been the means of conveyance. He had been returning from dressing a case of gangrene of the leg, when he was unexpectedly called in to see a woman in labour; the child was born just as he arrived, and all he had to do was to receive it into his hands and attend to the application of the bandage, &c.; still she had died from puerperal fever. He had burned all the clothes he had worn at the time, because he believed that the poison clung to one's clothes, as well as to the hair and to the furrows of the skin. If he had cases of puerperal fever again he would stop practice for some time.

He believed that in some cases puerperal fever was transmitted from the lower animals to lying-in women. He had seen a case which a midwife had attended, the midwife's ordinary occupation being about the byre of an inn; the patient had had puerperal fever and recovered, and this midwife's patients had all slight attacks of puerperal fever.

Dr. J. K. Kelly remarked that what Dr. Reid had said about the blood was hypothetical, nothing having been so far proved about the blood, while something had been proved about the streptococci. Dr. Croom had said that successful treatment in Dr. Buchanan's case would have been impossible, but Dr. Kelly thought that the woman's life might have been saved if she had been seen in time, and the diagnosis of pyosalpinx made. The question was one of diagnosis. He was surprised that Dr. Croom had not used the curette after labour at full term; he himself was in the habit of using it in cases of threatened fever when the intra-uterine douche did not prove sufficient. He agreed with what Dr. Croom had said about the relation of scarlet fever and other zymotic diseases to puerperal fever, and did not think Dr. M'Lachlan's arguments on that point conclusive. He himself remembered a case of death from scarlet fever after abortion, but he would not say it was due to puerperal fever. He did not think either that Dr. M'Lachlan had proved his case in regard to transmission from lower animals, though the subject was a very interesting one, and such transmission was very likely to occur in the country, animals being subject to suppuration just as we are.

Septic cases after labour and after abortion Dr. Kelly would divide thus:—(1) Those in which there was local disease, an inflammation, often going on to suppuration, with a suppurative fever (he would include here Dr. Buchanan's case); (2) those in which there was no local inflammation at first, but a general infection with all the symptoms of fever, a low form of peritonitis with distension of the intestines developing if the patient lived; in this second group pneumonia, such as Dr. M'Lachlan referred to, sometimes occurred.

The importance of this subdivision would be seen in the management and treatment of cases. One should never wait till the disease was apparent to the eye; on the contrary, patient's temperature should be taken regularly from the first, because a rise of temperature was nearly always the earliest indication of puerperal inflammation or fever. If the temperature did rise, one should use an antiseptic intra-uterine douche, and, that failing, curette. In the cases of group (2) there was no chance unless this local treatment was adopted at once, while in those of group (1), although the inflammation could not be prevented if it had already begun, it might be modified, because the quantity of septic matter entering the cellular tissue was of importance. He thought that it was probable that the micro-organisms producing group (1) and group (2) were different, and would like Dr. Buchanan to work out that point. They were all indebted to Dr. Buchanan for his paper, but he was not sure that the explanation given there as regards the pyo-salpinx was the right one; he thought that the pus might have entered some of the sinuses direct.

Dr. Beatson was interested in the question as to whether, in puerperal fever, one had to deal (*a*) with a definite and distinct poison such as had been assigned to scarlet fever and other zymotic diseases; or (*b*) with what Sir James Simpson (and Dr. Croom again that evening) had called a wound-fever or a condition of general sepsis. If the former view were adopted, then one must be in constant dread of infection; but, with the second view, there was the comfort that preventive measures were sure to be successful. It might also be debated whether, as in Dr. Buchanan's case, for example, there might not be a mixed infection. At confinement there was a condition of the system which seemed to predispose to attack, as was indicated by the susceptibility of women after childbirth to the inroads of the tubercle bacillus. It must surely be so also for other micro-organisms. He did not believe that the streptococcus alone could cause the disease, but there might be a sort of mixed infection. There was no doubt that in puerperal cases the poison spread by the lymph channels, and that fact was in favour of the agent being the streptococcus; but he remembered operating, in a case in the Western Infirmary, upon an abscess in the iliac region which had supervened upon confinement, and in the pus removed Dr. Buchanan had found the staphylococcus aureus. He would suppose, then, that the form of wound sepsis seen in puerperal women was due to a mixed infection, and that, just as an injury prepared superficial tissues for the action of micro-organisms, which were always present in them, and thus an abscess resulted, so in connection with confinement there was some preparation of the system for the inroads of the micro-organisms when they were introduced. House drainage he held to be of great importance in this regard. Though it might not be the source by which specific germs were introduced, yet faulty drainage might admit air that so lowered the patient's health that other micro-organisms gained a footing.

Dr. Beatson had had five cases of puerperal fever out of 600 cases of labour. Two of the patients were primiparæ, the labours being difficult, and wounds having resulted by which septic matter had gained admittance. The other three patients he had attended in previous confinements, and they had then had good recoveries, but, for some reason, they had changed their bedrooms upon the fatal occasions, one having gone into a room which communicated with a bathroom. One of the three died of a low form of septicæmia; the second of phlebitis of the veins of the leg (which had troubled her somewhat during pregnancy) with septic peritonitis; and the third had a rigor, with rapid rise of temperature, and death.

It was sometimes objected that a surgeon should not practise midwifery, and he would gladly give it up; but he considered that a surgeon now-a-days was the "cleanest" medical man from an antiseptic point of view, and that if one guarded a puerperal case just as one guarded an ordinary wound, one's treatment would be perfectly successful.

MEETING VIII.—17TH FEBRUARY, 1893.

OBSTETRICAL SECTION.

The President, DR. JOSEPH COATS, *in the Chair.*

DISCUSSION ON PUERPERAL SEPTICÆMIA.

(*Continued.*)

Dr. Lindsay Steven resumed the discussion, and at the outset explained that he did not desire to speak upon the question wholly from the point of view of a pathologist. In 1882 he had obtained an obstetrical appointment to an institution in the city, and he had held it for four or five years, during which time it had been his lot to conduct considerably over one hundred obstetrical operations. In view of the present discussion he had gone over the records kept by the officials of the institution, and had found that the great majority of cases in which his assistance had been called in had been forceps cases, but that there had also been cases of turning, one case of craniotomy, and a number of cases of retained placenta. There had been four maternal deaths in all; of these, one at least, and probably two, were directly attributable to puerperal fever. These facts he now mentioned to show that what he was going to say as to his opinions on the subject was not founded altogether on what he had seen in the *post-mortem* room.

With regard to the nature of puerperal fever, he thought that they could not, in the ordinary sense of the term "specific," consider puerperal fever as a specific disease. He thus much preferred the term which had been used by the President, and which appears as the title of the present discussion—*puerperal septicæmia.* That was a name which conveyed better his opinion as to the true nature of the disease. During the course of the discussion the term "wound-fever" had turned up on several occasions, and he thought it a particularly apt one. He used the term "specific" in the ordinary, practical, everyday use of the term, just as it was applied to scarlet fever, small-pox, &c. In that sense, he did not think it could be applied to puerperal fever. Any of the multitudinous conditions, which one could conceive as giving rise to septicæmia after a surgical wound, could give rise to symptoms not distinguishable from puerperal fever. He could understand also Dr. Buchanan's position. His (Dr. Buchanan's) aim had been to show that in those septic conditions following labour they had only one organism at work—the streptococcus pyogenes—and thus he (Dr. Buchanan) was inclined to call the disease specific. But it must be remembered that that organism would cause many other affections in no way related to puerperal fever. This multiple causative power was quite different from what they met with in reference to ordinary specific diseases. Thus, though he could understand Dr. Buchanan's position, he regarded it as not a practical one for ordinary practitioners in dealing with such cases. Though it was indeed very likely that there was only one organism at work, one would require a great deal more proof than had yet been brought forward to show that no other organism than the streptococcus pyogenes was capable of giving rise to all the local pelvic conditions, and the feverish symptoms which one might equally well call "puerperal fever." Dr. Steven thus considered puerperal septicæmia a "wound-fever," and specific only in the sense in which they could consider ordinary septicæmia, arising from wounds, specific.

With regard to causation, he agreed with those who had expressed their belief that puerperal fever could only be excited by causes coming from without and conveyed, by the hands of the accoucheur or of the nurse, to the pelvic organs directly. He was unable to accept the view that the poisons of the ordinary specific fevers were capable of exciting puerperal fever. Very early in his practice he had had to attend a confinement in an underground dwelling in Anderston. At the time of the labour a child in the house had had undoubted scarlet fever, and at his instruction had been removed to a neighbour's. The labour had proceeded and a healthy child been born. In the course of a week or so the mother's temperature had risen, and all the other signs of an acute febrile attack developed. A rash had appeared, but had not been characteristic (the house being very dark).

What determined him in saying that the woman had been suffering not from puerperal fever, but from scarlet fever, were the facts—that she had desquamated, that the newly-born child had taken scarlet fever and desquamated, and that, although he had had no similar case at the time, Dr. Steven himself had taken an abortive attack of scarlet fever. Scarlet fever could develop scarlet fever in a lying-in woman and nothing else.

In regard to the actual mode of conveyance of the poison causing puerperal fever, he wished to say a word based on his own experience. During the years in which he held the obstetrical appointment he had mentioned, he had acted also as assistant to Dr. Coats in the pathological department at the Western Infirmary. That circumstance had always caused him to approach his midwifery work with anxiety, and he had never gone to any case without extreme washing of his hands. He would not have been surprised if puerperal fever had occurred among his cases, but the reports already quoted (not his own, but those of the institution officials) showed only four maternal deaths, and of the four, only two which could be regarded as due to puerperal fever, and one of these was doubtful, as it had occurred after a very severe instrumental labour, in which considerable laceration of the parts had taken place. Those facts, he said, threw light upon the question of extreme cleanliness of hands. If anyone could be supposed likely to convey puerperal fever from pathological work, he should have been the one to do it. He had been aware of this at the time and had been taunted with it. The cases he had had to attend had all been abnormal ones, and thus his anxiety had been even more extreme; but his precautions also had been extreme, and he thought that the results as regards puerperal fever were exceedingly gratifying. Thus, he was strongly of the opinion of Dr. Beatson that a surgeon or other practitioner careful about cleanliness was not dangerous, and the fact would also, he held, seem to prove that a pathologist, if careful, could attend labours without risk. He thought that practitioners who were very busy, and had not time for cleansing their hands, were more likely to convey poison than specialists (surgical and otherwise), who appreciated the dangers and had ample time for such cleansing.

Dr. Coats concurred in Dr. Steven's closing remarks, saying that he had long held that a man who was conscious of the possibilities of evil was the most likely to be careful to avoid them.

Dr. Halket said that the part of Dr. Buchanan's paper, in which the causation of puerperal fever was discussed, had been of special interest to him. With regard to the relationship of that disease to the specific fevers, he must differ from the views expressed by Dr. Croom and Dr. Steven. His experience went the other way. The worst outbreak of puerperal fever he had seen had been in the Anderston district, and in that outbreak he had had in six days as many cases of well-marked puerperal fever. The symptoms had appeared shortly after labour. These cases had all been attended by the same midwife, and it had been ascertained that her husband, who lived with her, had been suffering at the time from typhus fever. That the puerperal cases were not instances of typhus was proved by there being no period of incubation, by there being no rash, and by there being no spreading from them of the infection of typhus. Then, again, he might mention that the last case of puerperal fever he had seen had been attended by a doctor who, at the time, had also been attending a bad case of erysipelas of the face and head. In this case the puerperal disease had run a rapidly fatal course, and there had been in it no external symptoms suggestive of erysipelas.

Dr. Buchanan had stated in his paper that it was "extremely probable that in a considerable number of cases the patient herself is the source of infection." Most of the cases Dr. Halket had seen would come under this group, the exciting cause of the fever being some form of nervous excitement on the patient's part. He narrated instances in which fright or grief had brought about such excitement, followed by an attack of puerperal fever, in patients whose cases admitted of no other explanation. It was all the more important to keep this mode of causation in view, as circumstances operating thus were often not revealed to the medical attendant.

Dr. Halket could endorse everything that had been said about the importance of preventive measures. When fever had set in he believed in the use of quinine, with dilute sulphuric acid, and of Dover's powder, employing also frequent douching with antiseptic fluids (a weak solution of perchloride of mercury being what he himself preferred). If the fever occurred after abortion, or if there were suspicion that part of the membranes or placenta had been retained after labour at full term, he cleared out the uterus. He had had a case with temperature as high as 107° F., and pulse 160, in which recovery followed such methods of treatment.

Dr. Robert Pollok said that during the last fifteen or sixteen years he had attended upwards of 3,000 cases of midwifery, and had had only five cases of true puerperal fever. This might seem rather a bold assertion, but he must explain that he eliminated a great many of his feverish cases. In earlier years he had seen typhus fever in puerperal women, and was sure that they had the rash, and that the disease followed its usual course. He had also seen scarlet fever in puerperal women, with the characteristic eruption and characteristic course. Such cases he would not call puerperal fever. Puerperal fever was, in his opinion, a traumatic infective fever, and it was a very serious and a very fatal affection if not treated early. The history was generally of a slow labour, often with instrumental or perhaps manual interference for rectification of mal-presentation; a few days after confinement feverishness began, accompanied by pain over abdomen, with tympanites—in fact, metritis and peritonitis. Such cases he had always labelled traumatic infective fever. In other cases, in the last few months of pregnancy there was perhaps abdominal pain from an inflamed condition of the endometrium. As a consequence of this the placenta became adherent, and after separation putrefactive changes were set up, and septicæmia or true puerperal fever resulted.

As to treatment—when the temperature rose Dr. Pollok's plan was to order antiseptic douching, with a warm (110° F.) solution of carbolic acid, 1 in 80. In all cases of intra-uterine injection the os must be patent and a double-channelled catheter used, or mischief would follow. Internally he gave quinine, digitalis, and opium, with perhaps small doses of calomel. He did not approve of the curette in cases with elevated temperature, as he feared it would only increase the irritation and hasten a fatal result. When death occurred, it was not directly from the inflamed endometrium; the fatal cases were those in which the abdomen was involved and was swollen and inflamed. Curetting did not reach that; the legitimate operation was then to open the abdomen and wash out the abdominal cavity.

Dr. Pollok's view was that if practitioners were cleanly and attentive they should not have an epidemic of puerperal fever, and he was happy to have heard that such was now rare. As an instance of the value of preventive measures, he mentioned that he had lately been attending a case of gluteal erysipelas with purulent discharge, and had temporarily given up midwifery on that account. Circumstances, however, had compelled him to attend a confinement which occurred unexpectedly; he stained his arms, hands, and nails thoroughly with a solution of permanganate of potassium, removing the staining with a solution of oxalic acid, took a hot bath, changed all clothing, and then attended the case; the patient made a good recovery without a single bad symptom. By thus staining the hands, &c., with the solution of potassium permanganate, and removing the stains with an acid solution, one was quite certain that every source of infection was removed, and that none was carried to the raw and readily absorbent mucous membrane of a parturient woman.

Grief, anxiety, &c., as instanced by Dr. Halket, might set up a feverish condition which, if the system was lowered, might end in suppurative changes and septicæmia. The proper course in such cases was to quell the neurotic storm by antipyrin, or other febrifuge, keep the parts aseptic, and stimulate the patient.

Dr. Jardine had recently had a case of puerperal fever in the practice of the West End Branch of the Maternity Hospital. There had been considerable loss of blood at the confinement, as the membranes had been adherent. The nurse had had a case on the south side of the city the day before, and it had subsequently been ascertained that the latter had erysipelas of the head and face. Both these cases had been douched by the nurse with the same syringe, and he believed the infection had been carried in that way. The nurse had had other cases, but had not douched any of them, and they had all escaped infection. The puerperal fever had developed on the fifth day, the patient presenting the symptoms described by Dr. Murdoch Cameron as those of serious import. It had proved fatal on the ninth day. She had never shown any rash or external signs of erysipelas. The erysipelas case had not been in his district, so he had not seen it, but he believed that she also had died of puerperal fever. He had never seen puerperal fever originating from the ordinary specific fevers, although he had known of a case of confinement with a child with scarlatinal desquamation in the same bed. The woman had made a perfect recovery. He had also had a confinement with scarlatina in the same house, and no bad effects had followed. He had seen a case of diphtheria in a puerperal woman, but it was a case of diphtheric, and not of puerperal, fever. The diphtheritic patches were found first on the vulva and thighs, but three days afterwards appeared also on the throat. Recently he had had a case in which a child, 14 months old, while in the catarrhal stage of measles, had insisted on being in bed with its mother, who had just been confined. The mother had no bad symptoms, but the baby developed the measles rash on the seventh day.

Dr. Malcolm Black raised a point with regard to the identity of the micro-organism found in puerperal fever (streptococcus pyogenes) with that of erysipelas. If erysipelas caused puerperal septicæmia, they might reasonably expect that cases of septicæmia would be apt to infect the attendants with erysipelas. He had seen two cases in which this seemed to have occurred. A woman had died of septicæmia, and after her death her husband became ill with erysipelas of the head and scalp; in the other case, the landlady became ill with erysipelas, and she had not only helped to nurse the puerperal case, but also to dress the body.

Dr. Black thought that Dr. Buchanan was right in the explanation he gave of the relation between the disease of the Fallopian tube and the other facts of his case. He remembered a similar one in the Maternity Hospital. After a normal labour septicæmia had occurred, and the woman had died. At the *post-mortem* Dr. Newman had found pus in the Fallopian tube and ovary, and considered that it must have been there before confinement. The patient had suffered from anxiety and privation during her pregnancy, and had tried to conceal her condition by tight-lacing.

In one case of puerperal fever in his own practice, he had thought that the infection was attributable to the baby, the stump of the cord, before separation, having become very offensive. He should imagine that they could have found the streptococcus pyogenes there in full force, if they had examined for it. Dr. Buchanan had said that the streptococcus pyogenes was to be found in what appeared to be the healthy vagina. If this were frequently so, Dr. Black would suggest that in ordinary circumstances it cannot be very dangerous, or they would have a much larger number of cases of puerperal fever. In order to attack a healthy puerpera, one would seem to require a virulent culture of it, such as was found in septic pus, in erysipelas, or in other women with puerperal fever. If it really were there in ordinary circumstances, and capable of attacking patients whose phagocytes had become diminished in activity, it would be prudent, he said, in all cases where the tissues were bruised during labour, or the patient out of health, to wash out the vagina with an antiseptic immediately after labour.

With regard to other infectious diseases giving rise to puerperal fever, he remembered attending at least three confinements with scarlet fever in the house, and all came through a normal course.

Dr. Lapraik had not seen a dozen cases of puerperal fever in the course of his practice. In his treatment of them he used to rely upon quinine in 10 grain doses, but more recently he had employed antipyrin for the high temperature. Pain he relieved by opiates. His results had been satisfactory, recovery having taken place even after a temperature of 105° had been maintained for a couple of days. He was not aware of having communicated the disease to his patients, and most of his midwifery work had been before the days of antiseptics.

Dr. Coats, having congratulated the obstetrical section upon the success of the discussion, said that though he had had no clinical experience of the disease, it had been his duty, as a pathologist, to try to formulate his ideas as to the meaning of puerperal fever and puerperal septicæmia. At first he had had great difficulty in understanding the disease as a pathological entity. He had learned his midwifery before the introduction of antiseptics, but began his work as a pathologist contemporaneously with the beginning of antiseptic surgery. He had always felt a debt of gratitude to Matthews Duncan for opening his mind on this question, and enabling him to catalogue and arrange the disease with other known conditions. Now, to his (Dr. Coats's) mind, it was to be regarded along with the surgical septicæmic conditions with which they were familiar. This had been impressed upon his mind by Matthews Duncan. The uterus, after delivery, was an open cavity communicating with the air, and was a somewhat complex cavity. If septic matter were introduced into it one would expect results such as were seen in similar circumstances in compound fractures and compound dislocations, for in such conditions, unless antiseptics were used, one almost necessarily had septic material introduced. Given that septic matter was introduced, two possible developments of septic influence might follow. Here he came to a term which had been used several times in the discussion, and used not in the way in which he had been accustomed to think of it and to regard it as accurate. That term was "wound-fever." In the septic processes occurring in connection with wounds, he distinguished septic poisoning and septic infection. Sepsis might exist as a mere surface thing; that used to be the normal condition in wounds, and was so still in abscesses. From such a surface they might have absorption of poisonous products, and that was the condition which he had been in the way of calling wound-fever or septic poisoning. It was then only the (poisonous) products that entered the system, and not the microbes themselves. In contradistinction to this there was the case of the microbes entering the tissues and possibly reaching the blood, the condition thus set up being that to which he applied the term septic infection. The former (septic poisoning) was milder and less important; puerperal fever was included in the latter group, as Dr. Sloan had pointed out. In septic infection the microbes got beyond the uterus, into the sinuses, or into the Fallopian tubes, and so on into the peritoneal cavity.

In regarding those more serious cases, Matthews Duncan distinguished (1) those which were analogous to pyæmia, developing from a compound fracture or other surgical case; and (2) those of puerperal peritonitis, in which he thought that the septic infection passed up the Fallopian tube to the peritoneal cavity. One point upon which Dr. Coats could not get light was as to how the septic infection could travel against the normal current in a ciliated passage like the tube; any spread of infection upwards must here be rare, but, of course, if there had been salpingitis before delivery, and the mucous membrane been injured, it would be easy for the microbes to travel upwards, and perhaps it was in such cases that one had puerperal peritonitis.

In regard to the question of specificity, he had in the former discussion (see vol. ii, 1892, p. 450) disagreed with Dr. Buchanan, and now he would agree with Dr. Steven that it was not right to call puerperal fever "specific," even though it were always due to the streptococcus pyogenes, any more than it would be to call pyæmia "specific." Puerperal fever was just one of the forms of septic infection, and could not be called a specific disease. It occurred in epidemics, because there were, in the terminology of the Pasteur school, various intensities of the microbe, and when an intense condition existed, it was more likely to propagate and cause septic infection than when not. It must be for the same reason that what was called auto-infection seldom occurred. He had no doubt that those micro-organisms, which were so universally present where there was any animal organic fluid, were present in the vagina, but they were not there normally in an intense form. He would suppose it as likely that they should be present there as in the skin.

Dr. R. M. Buchanan, in replying, thanked the Society for having honoured him in choosing his paper to form the basis of this discussion.

There were two points upon which all the speakers were agreed—firstly, that puerperal fever was uncommon where cleanliness and antiseptic principles were thoroughly observed; and, secondly, that it occurred most frequently amongst cases subjected to much manipulation. On the other hand, there was much difference of opinion expressed (1) as to what constituted puerperal fever, (2) as to the source of the infection generally, and (3) as to the specificity of the infection.

In the course of his examination of cases of puerperal fever *post-mortem*, Dr. Buchanan had found the pathological anatomy of the disease to be extremely varied. There were rapidly fatal cases of peritonitis, and cases of a more chronic order, including pelvic abscess, salpingitis, phlegmasia, and pyæmia (with suppuration in joints). All these varied conditions, however, possessed one striking characteristic in common, in that they were associated with the streptococcus pyogenes as their apparent cause. The clinical features of a case, then, would largely depend upon the structures involved by the virus. Peritonitis, he thought, would be accountable for most of the rapidly fatal cases, but how the virus reached the peritoneum was not quite evident. Those of his cases which had exhibited peritonitis proving rapidly fatal had more or less severe laceration of the cervix, opening a route for rapid absorption of the virus by lymphatics. On the other hand, the virus might gain access to the peritoneum in certain cases by a Fallopian tube, as seemed to be borne out by one of the cases which developed a salpingitis, and subsequently peritonitis. Then, again, the entrance of the virus into the uterine sinuses was attended by two very different results, according as its progress was accompanied by thrombosis or not, in the former case giving rise to phlegmasia, and in the latter to pyæmia. Furthermore, there were the cases in which the virus multiplied in the uterine cavity, giving rise to septic products, causing a more or less severe, but generally transient fever. The latter cases were likely to comprise that group of cases which benefited so much from douching and curetting. Some of the speakers had suggested a clinical classification of the varieties of puerperal fever, but no two had been agreed, and he thought it would only be possible to make a classification on a pathological basis such as he had indicated.

The most important question was undoubtedly the source of infection. With regard to the possibility of infection from certain of the specific fevers, he thought a lying-in woman, if exposed to one of these fevers, was liable to be infected in the usual way. But it so happened that certain of the specific fevers (particularly scarlatina and diphtheria) were accompanied by processes in the throat in which the streptococcus pyogenes played a part more or less, and the danger lay in its transmission in some way in throat discharges to the raw uterine surface. Again, in erysipelas, caused, as it was, by this streptococcus, the danger was even greater perhaps, since the virulence of the microbe was increased in this affection.

Auto-infection was a very debatable point, and raised the question of the various "intensities" of micro-organisms already referred to by Dr. Coats. The streptococcus pyogenes had been cultivated from apparently healthy mucous surfaces. On these surfaces it remained in a harmless condition along with other microbes until circumstances allowed it to assert its pathogenic qualities. It was extremely probable, therefore, that the raw uterine surface might be infected by streptococci carried upwards from the vagina, streptococci which, if at first "attenuated," would quickly regain their virulent activities under such favouring conditions. He thought the frequency of puerperal fever in cases subjected to much manipulation strongly supported the theory of auto-infection. Auto-infection was witnessed in a somewhat similar manner in other diseases, as pneumonia (capsule-cocci from the air-passages) and peritonitis (bacterium coli commune from the intestine).

In regard to the specificity of the infection in puerperal fever, Dr. Buchanan did not wish to convey to the Society in what he had said that he regarded the streptococcus pyogenes as the only causative agent in puerperal fever, although in his cases it had appeared to be so. There were other "septic" microbes to which cases might be due, especially if they happened to be directly inoculated by the examining finger or by instruments.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

SESSION 1892-93.

MEETING IV.—9TH JANUARY, 1893.

The President, DR. SAMSON GEMMELL, *in the Chair.*

I.—SPECIMEN OF OSTEO-MYELITIS OF FEMUR, WITH AN UNUSUAL DISTRIBUTION OF THE NECROSIS.

BY MR. CLARK AND MR. RUTHERFURD.

Mr. Clark stated that the patient from whom the specimen had been obtained was a boy, 10 years of age, who had been perfectly well till five weeks before the attack in his thigh commenced. There was no history of injury, so far as could be ascertained, but the mother thought that the disease was due to his running about too much at the coast. The first symptom had been the occurrence of cramp-like pains in the left thigh, which had become very bad, and been accompanied by a considerable rise of temperature and progressive emaciation. The doctor in attendance had thought that it was a case of disease of the knee-joint, and had opened what he took to be an abscess at the side of the tibia, but it was doubtful if any pus had escaped. When Mr. Clark saw the patient first, there was a remarkable absence of swelling about the knee, but movement of the joint caused extreme pain, and there was a history of startings at night. There was a swelling at the lower part of the thigh, due to an abscess reaching from the popliteal space up to the middle of the thigh. Mr. Clark's diagnosis was of osteo-myelitis, but he thought that the joint was beginning to be affected, though he did not know exactly how. He advised bringing the patient into the Royal Infirmary. This was done, and, after consultation, amputation was performed about the middle of the thigh. The knee-joint, when examined, was found to be affected only by one or two pin-point perforations in the cartilage, which had had some inflammation in the joint as their result. The most remarkable discovery was that of certain sets of localised points of necrosis in the epiphyseal end of the diaphysis and in the epiphysis itself, corresponding to the perforations of the cartilage. These would be more fully dealt with by Dr. Rutherfurd, whom he had asked to make a special examination also of the synovial membrane for any indication of tubercular disease.

After operation the case had had an aseptic course, the dressings not being changed for ten or twelve days, and the wound being then found healed. The patient had since been quite well, except for an attack of scarlet fever.

Mr. Rutherfurd submitted the following pathological report:—

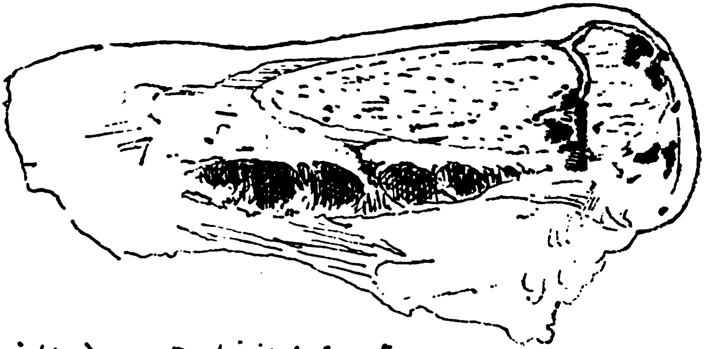
"The lower half of the femur, with the adherent soft parts, has been laid open by longitudinal antero-posterior saw cuts. There is thus brought into view—

"1. An abscess cavity between the posterior surface of the bone and the periosteum, extending upwards for about 4 inches from the level of the joint. The contents of this were thick green pus; its walls are still pouched, and its cavity crossed by bands. The internal surface is finely granular to the naked eye. Microscopic examination shows a well-formed layer of granulating tissue with abundant vessels; no appearances of tubercles or of caseation.

"Microscopic examination of the somewhat thickened synovial membrane shows patchy round-celled infiltration; no appearances suggestive of tubercular disease.

"2. The bony tissue of the lower part of the diaphysis and the epiphysis with the persisting thin layer of epiphyseal cartilage, and the articular cartilage.

"The principal seat of disease is at the lower extremity of the diaphysis, where there is a sequestrum incompletely detached, occupying about half the thickness of the bone, lying parallel to the epiphyseal cartilage, and presenting in the lower extremity of the abscess cavity. The sequestrum forms a plate nowhere more than a quarter of an inch in thickness. It is of a green colour, dense, and bathed in pus; it is surrounded by an area in which the trabeculæ of bone have become absorbed; the epiphyseal cartilage is also wanting over an area corresponding to the sequestrum, and the latter is evidently in process of separation.



S. is placed upon the principal sequestrum.
The shaded areas in the bone represent granulations
surrounding more or less detached sequestra.
The shaded part behind represents the abscess cavity.

"On making a second section of the bone, two smaller foci of necrosis are found involving the lower end of the diaphysis and the epiphyseal cartilage.

"Further numerous small centres are found immediately under the articular cartilage, which has in several cases become absorbed, with the formation of sharply defined cloacæ communicating with the joint. There is no general undermining of the cartilage by granulations; elsewhere it is firmly attached to the bone. The necrotic patches, mostly from one-eighth to one-fourth of an inch in diameter, are sometimes free in a bed of granulations, sometimes incompletely detached; in consistence they all resemble the one already described.

"The tissue of the bone otherwise seems healthy in consistence and colour, the cancellous tissue being everywhere firm, and with no appearance of gelatinous granulations or caseation."

Dr. Gemmell and *Mr. Clark* both expressed some doubt as to the large abscess being connected with the small necrotic part in the diaphysis, and Dr. Rutherfurd was again asked as to any microscopic evidence of tuberculosis.

Mr. Rutherfurd replied that he had found none in the points examined.

Dr. Macewen said that the little caseating foci were just where one would expect tubercular foci. It was always difficult to demonstrate microscopically the tubercular nature of such lesions, but inoculation experiments on guinea pigs were usually successful. There seemed to be some fresh foci beginning in the bone higher up. Though not a typical case, the appearances were very like those of tuberculosis and he thought it was only upon a germ theory that they could be explained.

Mr. Rutherfurd asked, "What about the abscess?"

Dr. Macewen supposed it to be a so-called "tubercular abscess."

Mr. Rutherfurd considered the condition of the abscess-wall to be against that theory. He thought the osteo-myelitis pyogenic.

II.—SPECIMEN OF SIMPLE FRACTURE OF THE FEMUR FROM A CASE IN WHICH THROMBOSIS HAD LED TO PULMONARY EMBOLISM.

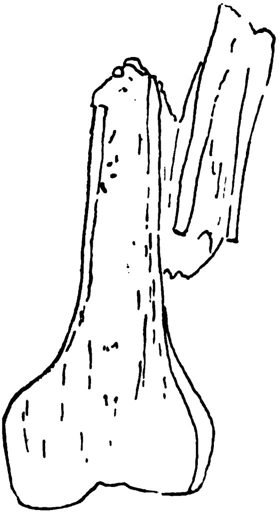
By Mr. Rutherfurd.

Mr. Rutherfurd showed this specimen as well as photographs of it which he had prepared. His account of the case is as follows:—

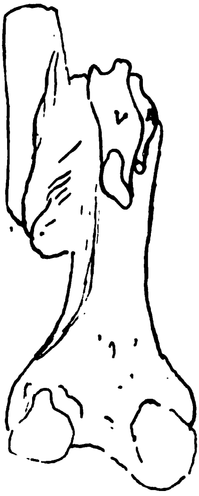
"The patient was a man, aged 49, who died in the Royal Infirmary six weeks after the receipt of his injury. During the last two weeks he had hæmoptysis. The limb had been treated on a double inclined plane.

"The fracture, pretty irregularly oblique, has occurred at the union of the lower and mid thirds of the femur. The lower fragment has been carried backwards and inwards, and there is riding to the extent of 2¼ inches. The fragments of the shaft do not lie parallel, and are nowhere in contact, being separated by from a quarter to half an inch of fibrous and muscular tissue full of extravasated blood.

"Beyond a slight and irregular crusting of the shaft surfaces with new bone, there is no attempt at union between the fragments. On the side of the medullary cavity there has been, especially in the case of the upper fragment, some replacement of the fat by granulation tissue. There is little or no rounding off of the fractured edges.



Longitudinal Section of the Fragments, showing their unaltered ends embedded in muscle, &c.



Posterior View, showing Artery and Vein flattened out over end of Lower Fragment.

"The femoral artery and vein have been tightly stretched over the upper end of the lower fragment, the latter so much flattened out and distorted over the irregular bony surface as not to allow the passage of a probe through it. At the same time, no actual adhesion of the opposed surfaces of the vein can be made out.

"About an inch above the level of its practical obliteration, the vein was found to contain a small piece of slightly adherent thrombus. It was not entirely opaque, but from the manner in which it adhered, seemed to have been in existence for some time. No thrombosis was found in the femoral vein at the groin, or for some distance downwards.

"For the report on the heart and lungs I am indebted to Dr. J. Lindsay Steven:—

"'The heart presents perfectly healthy characters, although the muscular tissue is somewhat soft. No thrombosis is found in any of the chambers.

"'In the left pleural cavity there is a large quantity of fluid blood. On removing the left lung a few old semi-cretaceous, perfectly quiescent, tubercular nodules are found in the extreme apex, around which are a number of old fibrous adhesions. The lower lobe is the seat of an enormous hæmorrhagic infarction, which involves almost the whole substance of the lobe. On opening the pulmonary artery a large granular adherent thrombus is found projecting from it into the smaller arterial branches supplying the affected lobe. It is evident that the pleural hæmorrhage has taken place by diapedesis. The heart is again examined to find a source of this without avail.

"'Liver, spleen, kidneys, and brain examined showed nothing unusual.

"'The man had been spitting blood slightly for two weeks, and the presumption is that the embolism in the lung had been small at first, and had subsequently grown—a view favoured by the fact that at the seat of injury only the smaller veins were found to be thrombosed.—J. L. S.'

"The case is reported as illustrating—

"1. The occurrence of non-union.

"2. A mode of fatal issue in simple fracture—namely, by pulmonary embolism.

"Further, it would seem not unreasonable to suppose that, in the present instance, these were due to one and the same cause—namely, thrombosis at the seat of injury. That more extensive thrombosis was not demonstrable at the time of death may perhaps be explained on the ground that the thrombi were undergoing disintegration, which would carry with it the risks of embolism. The limited extent of the thrombosis is also of interest as indicating its dependence on a mechanical cause, in contrast to the very extensive thrombosis which is apt to be set up by trifling or altogether intangible local injuries in gouty or bedridden patients.

"'On thrombosis and embolism in simple fracture, and on thrombosis as a cause of delayed Union *vide* Hamilton on *Dislocations and Fractures*, edited by Stephen Smith, pp. 55 and 77; also a paper by the late Mr. Callender, *British Medical Journal*, 30th November, 1872; Jacobson on the general pathology of fractures in Holmes' *System of Surgery*, third edition, vol. i; Callender and Holmes on injuries of the veins, Holmes' *System of Surgery*, third edition, vol. iii."

Dr. Macewen asked as to the exact condition of the clot found in the veins, and as to the possibility of fatty embolism.

Dr. Rutherfurd replied that symptoms from the latter cause would have showed themselves earlier, and that he would not expect it to have produced typical hæmorrhagic infarction.

Mr. Maylard asked if there had been any œdema of the limb, and was answered in the negative.

Dr. Knox referred to a similar case which he had recently had under his care. The patient had had a simple fracture of the femur at the junction of the middle and lower thirds. It had been treated outside by means of a long splint. A fortnight after it was first put up, the apparatus had been taken down because the toes were becoming gangrenous, all of them having become black and dry. At the end of the third week the case had been brought into the Royal Infirmary, and then there were also several patches of gangrene on the foot, and a commencing gangrene in the calf of the leg. After consultation it had been agreed that there was some pressure on the femoral artery. The fragments had been found to be riding for about 3 inches. After a little the muscles of the calf had seemed simply to melt away, and the whole leg had become œdematous, and had obviously been passing into a gangrenous state. He had, therefore, amputated (about ten days previous to the meeting) at the junction of the middle and lower thirds of the thigh. The proximal cut end of the main artery had then been seen to be occupied by a plug, which was pulled out by the forceps, and found to be about an inch long. The other vessels had bled in the usual fashion, and the vein had seemed pervious. On examining the part removed, he had found the artery thrombosed in its whole extent, the clot being greyish, as if undergoing purulent degeneration, especially at the back of the knee-joint.

In reply to *Mr. Maylard*, Dr. Knox added that in his case the arteries had not been atheromatous, and that the patient's age was 29.

III.—CIRCULAR SAWS DESIGNED TO BE USED WITH THE DENTAL ENGINE FOR TREPHINING THE SKULL AND OTHER OPERATIONS ON BONE.

BY DR. D. N. KNOX.

Before showing the apparatus in question, Dr. Knox said that he had been led to have these saws prepared for use in trephining the skull, because that operation required the greatest possible delicacy of hand, and that was not easy to maintain with the instruments ordinarily in use. The saws varied in diameter from five-eighths of an inch to 1⅛ inch, and were fixed upon a round spindle, by which they were attached to and detached from the hand-piece of the dental engine by means of a special form of forceps made by a friend and now shown. The engine employed had been White's (Bonwill) new cord dental engine, fitted with White's hand-piece No. 7.

Dr. Knox had employed the apparatus in a case upon which he had operated about six weeks previously. Epileptiform convulsions had followed upon an old hitherto undiscovered fracture, and they had with great ease removed a triangular piece of bone, measuring 1¼ inch on each side. He considered that such saws should also do well in cases of compound depressed fracture, or in any case where one wished to cut off an angle of bone, because they worked in such a small space, and thus one could avoid the preliminary clearing away of tissue, which was necessary with Hey's saw; sawing off processes in removing superior maxilla was an instance of what he alluded to. Larger saws might be used where the bone was soft, but not for hard bone, because the strength of the engine was limited. With a small saw he had been able even to cut through a tooth as he held it in his hand. It was a mistake to lean too hard, as the saw then became jammed. In a case of laminectomy he had used one of the larger saws for dividing the laminæ. Here one was at a disadvantage because of working in a deep hole, but he had snipped across the spine with bone forceps. The laminæ were not composed of such hard bone as the skull. Dr. Alex. Patterson had used the saws in similar cases, and found them to act well.

The dental engine might also be used with suitable fittings for drilling (*e.g.*, into mastoid sinuses), and for anything for which they ordinarily used a chisel or gouge. Burrs for such purposes, of which some were shown, might be made of any size or shape.

Something similar to the apparatus now shown had been used in America, but Dr. Knox was not aware of its having been employed before in this country.

Dr. Macewen spoke of having used similar circular saws for the last seven years. He had a surgical engine made by S. S. White, of Philadelphia, with attachments, allowing of its being worked either by the foot or by the hand—that for the hand being "geared up," and consequently possessing much greater power. The circular saws were very handy, if there were no fear of doing harm under the bone, but in regard to the skull he would advise a great deal of practice before using it on the living body. Owing to the thickness of the skull not being uniform, and to the tendency of the saw to dip in the centre were it not carefully regulated, there was danger of the membranes and brain being unexpectedly pierced. A saw was sometimes used which acted by to-and-fro movement, was fitted on to the engine, and was much safer, but on account of the difficulty of getting it to work he had not used it often. For the skull, he preferred first the ordinary trephine, making two holes at a distance from one another, and then introducing a special director under the intervening bone, then sawing it through. The forceps shown by Dr. Knox formed a much handier way of attaching and detaching the saws than that used for his engine. With heavy work he would expect the dental engine shown by Dr. Knox to get overheated. He himself had duplicate handles, which he always took with him when about to operate. For cutting the laminæ the apparatus should act well, if one were not afraid of injuring the spinal cord; for the lower jaw, in getting down to the inferior dental nerve, it was also of service, but he was doubtful of its use for the upper jaw. With properly constructed drills it acted admirably for mastoid cases, a large number of such cases having been operated on in this way by him (Dr. Macewen).

Mr. Clark considered that there was a great future for the surgical engine. For burring out carious bone he thought it much better than the gouge or even Volkmann's spoon, while for taking off corners of bone it was better than the trephine or Hey's saw. He sympathised with Dr. Macewen about the dangers of going too deep.

Dr. Knox had not been aware of Dr. Macewen's having used the circular saws. He had had those shown made intentionally broad, so that one might be able to see what was being done, because of the difficulty mentioned by Dr. Macewen.

IV.—SPECIMENS FROM A CASE OF DIFFUSE GANGRENE OF THE LEFT LUNG, DUE TO THE UNSUSPECTED PRESENCE IN THE BRONCHUS OF A TEMPORARY MOLAR TOOTH, WHICH HAD ACCIDENTALLY BECOME DISLODGED WHILE PATIENT WAS UNDER AN ANÆSTHETIC.

BY DR. T. K. MONRO.

Dr. Monro's report has been published as an Original Article at page 112.

Mr. Maylard said that until the *post-mortem* revealed the true state of matters, they had had no suspicion of what had proved the actual cause of death. The morning on which the operation was performed was an exceptionally cold one, and he had been reluctantly compelled to conclude that the boy had got a chill in some way at the time, and that all his pneumonic symptoms arose from that cause. Thus, with no apparent evidence to lead to any other opinion, his interest had not been awakened to think of another cause. After, however, the *post-mortem* had shown the true nature of the boy's illness, the fact was recalled that during the mopping out of the back of the throat with sponges on forceps, owing to some slight respiratory trouble while under the anæsthetic, two loose teeth were dislodged and removed. Mr. Maylard remembered then enjoining caution with regard to the possibility of any other loose tooth slipping down the throat. However, respiration had become quite normal again, and no such accident was therefore considered as having happened.

The only clinical feature during life, to which some diagnostic importance should have been attached, was that of the fœtor of the breath occurring some two days before death. Gangrene of the lung in young children was almost always associated with a foreign body.

Mr. Maylard said he thought the case not only of interest from a purely pathological point of view, but peculiarly instructive from a clinical and practical one. The boy had lost his life from the accidental dislodgment of a tooth, while swabbing out the back of the throat, when under an anæsthetic.

Dr. James A. Adams referred to a case which he had seen with Dr. Walker Downie (see *Glasgow Medical Journal*, 1893, vol. i, p. 30). In it, also, there had been offensive smell.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

SESSION 1892-93.

MEETING III.—25TH JANUARY, 1893.

The President, DR. ROBERT POLLOK, *in the Chair.*

I.—THREE CASES OF DOUBTFUL SEX IN ONE FAMILY.

BY DR. JOHN LINDSAY. (See page 161.)

Dr. Lindsay described three cases of malformation of the external genital organs occurring in one family, and showed one of the children. He was of opinion that all were hypospadic males with undescended testicles, although two of them had been brought up as girls. The parents and six other children of the marriage were naturally formed.

II.—THE PROPHYLAXIS AND TREATMENT OF ABORTION.

BY DR. POLLOK. (See page 261.)

Dr. Pollok said that there was a popular belief that very early abortions required neither care nor attention, but he was rather inclined to emphasize the very opposite—viz., the earlier the abortion the longer rest and the greater care. He classified the causes of abortions under five headings—Traumatic, mechanical, neurotic, toxæmic, and inflammatory.

In discussing the treatment, he dwelt upon the necessity of thoroughly emptying the uterus. He had always found it very difficult to do this with the finger, and ovum forceps he had found total failures. If rest and sedatives failed to prevent it, he plugged, and after from twelve to twenty-four hours usually found the complete ovum come away on removing the plug. If not, he plugged again.

When there was retention of a part he dilated with Smith's metallic bougies and curetted. After douching he mopped the cavity with perchloride of iron to arrest hæmorrhage, and inserted a strip of iodoform gauze, plugging the vagina with the same. This was removed in twenty-four hours, and a hot antiseptic douche used night and morning.

Drs. Reid, Cameron, Sloan, Turner, Miller, Black, Gray, and *Howie* took part in the discussion which followed, and the *President* replied.

MEETING IV.—22ND FEBRUARY, 1893.

The President, DR. ROBERT POLLOK, *in the Chair*.

I.—SPECIMEN OF AN UMBILICAL CORD WITH A KNOT.

BY DR. HALKET.

Dr. Halket showed an umbilical cord with a knot which had caused the death of the fœtus.

II.—DISEASES OF THE EYE MOST FREQUENTLY MET WITH IN GYNÆCOLOGICAL AND OBSTETRICAL PRACTICE.

BY DR. A. MAITLAND RAMSAY.

Dr. A. Maitland Ramsay read a paper on diseases of the eye most frequently met with in gynæcological and obstetrical practice, and illustrated it by means of lime-light views. In introducing the subject he referred to the intimate vascular and nervous connection of the eye with other parts, whereby the nutrition of the eyeball was governed at all times by changes in the nutrition of the body as a whole. He wished to draw attention to the frequent association of eye symptoms with functional changes in the female genital organs—(1) Changes incidental to menstruation and its disorders; (2) to pregnancy and the puerperal state; (3) and the changes which were liable to occur during lactation.

1. With the establishment of menstruation certain eye diseases attained their maximum of frequency, *e.g.*, inflammation of the cornea, of the sclerotic, of the iris and choroid, and even of the optic nerve and retina; though, for the most part, this was to be regarded as coincident with, rather than dependent upon, the occurrence of menstruation. He gave notes of a case of inflammation of the cornea and sclerotic which relapsed at each menstrual epoch, although almost well in the intervals. Defects of visual acuteness and contraction of the field of vision had been noted as occurring during menstruation. Frankelstein's investigations had shown that the limitation in the field of vision began two or three days before the commencement of the flow, and reached its greatest intensity on the third or fourth day of menstruation. The limitation was greatest where there was most disturbance, especially where the loss of blood was very abundant. The colour sense also was disturbed, especially for green, 20 per cent losing it.

Vicarious menstruation had sometimes occurred into the eye. Laurence had recorded a case. Effusion of blood into the vitreous at the climacteric period was not uncommon. He mentioned the amaurosis menstrualis, and the ophthalmia menstrualis of the old writers, and gave the two theories of causation, viz:—reflex and toxic, and instanced cases.

2. In pregnancy the most important group of eye affections was dependent upon or associated with retinitis albuminurica. He divided them into two classes—(1) Complete blindness for the time being, with no gross retinal lesion; (2) those without great visual defect, but with characteristic lesions of the optic nerve and retina. In the latter the defect was more or less permanent, and if complicated with uræmic poisoning, might pass into complete blindness. He gave illustrative cases. In the albuminuric retinitis of pregnancy one eye only might be affected, but in that due to chronic renal disease both eyes were affected simultaneously. Separation of the retina might occur during pregnancy by itself, or along with albuminuric retinitis. The prognosis was more favourable than in ordinary circumstances.

During the puerperal state embolism of the central artery of the retina, with sudden and complete blindness, had occurred. Mackenzie had given several cases of ophthalmitis after delivery. The patients as a rule had died with all the signs and symptoms of pyæmia. After severe *post-partum* hæmorhage, marked diminution of vision, followed by atrophy of the "optic" nerve, had occurred. He considered at some length ophthalmia neonatorum, and said that more than one-tenth of all cases of blindness were due to it. If these cases were seen early recovery should take place, but if the cornea had become involved the prognosis was unfavourable. He dwelt strongly on the prophylactic treatment, which had reduced the percentage in Leipzig Lying-in Hospital from 7·5 per cent to 0·5 per cent. The eyes should be wiped and bathed with clean water or a weak antiseptic solution, and a drop of 2 per cent silver nitrate solution should be instilled between the lids. The curative treatment was to keep the eye thoroughly clean with 1-10,000 perchloride of mercury solution, or saturated solution of boracic acid, bathing every hour if necessary. The everted lids should be brushed once a day with silver nitrate—2 to 4 grains to the ounce, and when the discharge diminished the palpebral conjunctiva should be lightly touched with a crystal of sulphate of copper. Iodoform or red precipitate ointment should be applied to the edges of the lids to prevent them adhering. If ulceration of the cornea had occurred, atropine or eserine should be applied, the former if it were central, and the latter if it were peripheral. If the ulceration were severe a compress and bandage should be applied.

3. During lactation atrophy of the optic nerve occurred when there had been a rapid succession of children. Functional disturbances were common, most marked in women affected with hypermetropia. Episcleritis he had seen occur when the patient had been enfeebled by prolonged lactation. Power had pointed out that obstruction of the lachrymal ducts and lachrymal abscesses were not uncommon. The child sometimes scratched the mother's cornea, and there was a tendency to suppuration on account of the exhaustion of the system having lowered the vitality of the cornea.

In the discussion which took place, the *President*, *Drs. Reid*, *Cameron*, *Richmond*, *Gunn*, and *Howie* took part, and *Dr. Ramsay* replied.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

MEDICINE.

By T. K. MONRO, M.A., M.B.

Bradycardia. By Hampeln. — This may be either physiological or pathological. The former variety is observed in convalesence and after confinement; the latter may be connected with poisoning, with functional or organic disease of the heart, or with disease of other organs. Bradycardia may be transient or permanent, the latter form especially being of interest to the clinician.

Temporary slowing of the pulse may be met with during the febrile period of typhoid; in tubercular meningitis; in diseases of the brain and spinal cord; in disorders of the alimentary tract; in poisoning by digitalis, alcohol, and tobacco; in icterus and uræmia; and as a result of mechanical irritation of peripheral nerves. That which may be considered a pure functional neurosis of the heart seems to occupy a position intermediate to the two groups. It may be present by itself or in association with other neuroses, and it seldom becomes very pronounced. It is different from the bradycardia which occurs in connection with organic affections of the heart, especially aortic contraction, sclerosis of the coronary arteries, and sclerosis and fatty degeneration of the myocardium. In aortic stenosis, the bradycardia is compensatory, for the heart, by beating more slowly, contends to greater advantage against the obstruction. Hampeln gives the same explanation of the slow action in lesions of the myocardium. Bradycardia must be taken in all cases as indicative of a more or less dilated heart. The same quantity of blood which, in the normal state, is expelled by sixty or seventy contractions per minute, must now be expelled by twenty, thirty, or forty contractions, so that the ventricles must receive two or three times the normal amount of blood, and such a quantity they could not contain unless they were dilated.

Hampeln recommends that the treatment should be directed, not so much against the bradycardia as against the cardiac asthenia. Stimulants, *e.g.*, atropine, may restore the normal rate of the heart. In a case of aortic insufficiency, with failure of compensation and a pulse of forty per minute, the symptoms disappeared under the use of digitalis, which actually accelerated the pulse to sixty. In cases of this kind, degeneration of the myocardium was the real cause of permanent slowing, and the author remarks that the condition of this tissue should be our guide in treatment.—(*La France Médicale*, 6th January, 1893.)

On Disease of the Conus Medullaris and Cauda Equina in the Female. By Eulenburg.—A female patient, æt. 36, had been attacked, eight years before she came under observation, by uterine pains with weakness and pains in the legs. Five years afterwards these symptoms became worse, and after a time pains began in the sacrum and on the flexor aspect of the thighs. There was also paralysis of the bladder, with severe pain in that organ; anæsthesia in great part of the abdomen; burning pains in, and also anæsthesia and paralysis of, the rectum. Examination revealed more or less complete anæsthesia and analgesia of the buttocks, perineum, anus, vulva, and upper inner portions of the thighs; likewise retardation of sensory conduction over considerable portions of both lower limbs as far down as the toes. The cutaneous reflexes could only be produced by strong stimulation, and there was no ankle-clonus. The electrical reactions were altered in the region of the sciatic nerve.

In the course of five months, a slow but continuous improvement took place under the following treatment:—Central and peripheral galvanism alternately, peripheral faradism, massage, and gymnastics; cool sitz-baths twice daily. Patient also got salol and boric acid lemonade. The bladder was washed out frequently with boracic acid solution. For the burning sensations about the anus and coccyx, franklinic electricity was employed, in addition to the sitz-baths (antipyrin, cocaine suppositories, &c., having been of no service). Hypodermic injections of strychnine were given almost daily for a considerable period.—(*Deutsche Med.-Zeit.*, 2nd January, 1893.)

Immunity from Leprosy of the Fifth Generation, and Non-contagion. By Albert S. Ashmead, of New York (*Sei-i-Kwai Medical Journal*, December, 1892).—There is a fact which, I believe, bears very directly and very strongly upon the subject of non-contagiousness of leprosy. It is recognised by all Oriental leprologists that every child of a leper has a diminished inheritance of the disease, and that after the fourth generation, if no healthy blood intervene, the disease is entirely extinguished. There is about these matters a very interesting law in China and in Japan; it is expressed in Virchow's *Archives*, by Dr. Friedel, in these words:—No marriage with children of leprous parents is allowed. If leprosy appears in a family formerly clean, all betrothals and contracts of marriage previously entered into are rescinded as a matter of course. Only when the betrothed or married persons suffer from leprosy of the same degree and type, *e. g.*, of the fourth degree or generation, does the alliance stand. Only those with the same degree of the disease are allowed to marry. A leper of the fourth generation, even if he no longer shows any external marks of the disease, can only marry a woman with the same degree of the disease; their offspring is free from leprosy, and no longer forbidden human intercourse.

Here we have, then, a perfect immunity acquired in four generations, and the fifth generation restores the health of the race. There is certainly a connection between this extinction of the disease and the present immunity of Europe, when that part of the world had been a prey to leprosy during several centuries of the middle ages. Evidently, in the West, simple isolation has unconsciously accomplished, in the lapse of time, what a rational legislation tries to bring about in the East. This legislation has probably preserved the populations of China, and of the East in general, from entire destruction. I do not mean to say that the rule is always and carefully adhered to, because in that case the disease would be extinct now; but the rule is sufficiently known, and sufficiently adhered to, to make its salutary consequences felt.

Isolation, then, and exhaustion of the pathological principle, after the course of four generations, are the only methods known to us of acquiring immunity. Wherever the disease still exists, it is the violation of that Oriental law, with which all the priests and doctors of the East are so familiar, that has kept it alive.

Leprosy in China is very frequent; it rages with the greatest intensity in the maritime provinces of the south, but it abounds also in Central China. It is generally admitted that the disease does not spread beyond the regions where it is established.

The Chinese believe that the disease may be communicated by the contamination of food. This generally received opinion must seem to us strange at first; but the fact that the lepra-bacillus is found in greatest abundance in the mucous membranes of the mouth, lends it a certain degree of plausibility. The Chinese custom is to group together and eat rice from the same bowl, with chopsticks which are used promiscuously by the whole household. If there is really something in the Chinese views of food-infection, the necessity of isolating a leper from his countrymen is evident.

The Chinese government believes that leprosy is contagious, but apparently the people do not share this belief. There are asylums for the isolation of lepers all around Canton, yet a leper may enter any city by paying a certain sum which goes to the leper fund. Nobody thinks of refusing to buy from a leprous huckster; and provisions are bought fearlessly in the store of a leprous caterer.

But even the Chinese believe, with all other Eastern nations, that leprosy is communicated by cohabitation; and they have some strange superstitions on the subject—*e. g.*, it is believed among the leprous women of China that a woman affected with leprosy can be cured by cohabitation with healthy males.

To allow the leprous male to have intercourse with healthy women is simply to strengthen and nourish the lepra-bacillus, which, on the other hand, is gradually weakened as lepers breed with lepers, till, at last, the obligate parasite is extinguished.

European residents in China, even where their contact with the natives is very close, catch the disease only when they uneuropeanise themselves altogether—*i. e.*, when they eat and live with the natives on the most intimate terms.

It follows from what has been said that the danger of leprosy does not arise from its contagiousness, but from the continual redintegration of the disease, which results from the intercourse of lepers with healthy individuals. Contrarywise to what would happen in the case of syphilis, this intercourse strengthens and perpetuates the disease. As a matter of fact, no greater difference can be imagined in the etiology of two diseases than that which exists between leprosy and syphilis. According to Colles' law, a woman who bears a child to a syphilitic man acquires perfect immunity from syphilis. Now, nobody doubts, either in China or Japan, that a leprous woman bearing a child to a healthy father acquires [confers on the father?—Ed.] some measure of immunity, while the child receives and transmits the susceptibility. This is a fact diametrically opposed to Colles' law.

Many observers have compared leprosy and syphilis. Yet the one, appearing at puberty, spares the race; the other, which is congenital, tends (both parents being supposed to be syphilitic) to destroy the race. In the one, the intervention of pure blood strengthens the virus; in the other it attenuates it.

The attenuation of a virus, when it is allowed to take its own course, seems to me capable of more general application. It is believed in Japan that a child of parents who, by having had the disease, possess immunity, does itself possess a natural, though incomplete, immunity.

This was the greatest obstacle to the introduction of vaccination into Japan. Artificial immunity of the parents would, it was said, interfere with the natural power of resistance of the child. In consequence of such ideas, variolisation and syphilisation were always popular in Japan.

The complete devitalisation of our introduced vaccine virus after a certain series of inoculations, when a new virus had to be imported, proves that these Orientals were right. The devitalisation of the germ of syphilis, which has occurred in Japan after thirteen centuries of syphilitic inoculation, proves also that a natural immunity is acquired by the very transmission of the disease.

Let me say now what I believe must be rationally deduced from all I have said. What is generally called contagiousness does not essentially belong to the disease itself—it is entirely in the individual who contracts it. Its measure is that of the resistance of the individual or of the race.

In four generations of lepers, regulated as I have said, the power of resistance becomes complete. In an unconscious, blundering, mediæval way, the resistance has been acquired by Europe. There is no place for the idea of contagion in these facts.

DISEASES OF THE SKIN.

By Dr. A. NAPIER.

Post-Mortem Appearances in Cases of Yaws.—Dr. Beavan Rake, of Trinidad Leper Asylum, returns to the still vexed question as to the identity of syphilis and yaws, being led to study the matter by the recent publication of Numa Rat's essay on Yaws and Jonathan Hutchinson's prefatory remarks thereto. His experience has strongly impressed him with the opinion that the two diseases are totally distinct, and he supports this with the details of four *post-mortem* examinations made at the Leper Asylum on patients, who, for a shorter or longer period during life, had suffered from yaws.

In none of the patients was anything found like the primary chancre of syphilis, nor were there tertiary symptoms such as deep and obstinate ulceration with destruction of bone, or gummata in the subcutaneous tissues or viscera. It is true that the fourth patient was the subject of a perforating ulcer, but this was probably referable to the leprosy from which he was also suffering. It is well known that perforating ulcer is a very common symptom of leprosy.

In Case II, who apparently became infected from Case III, the legs seemed to be the seat of inoculation, and the disease first appeared as an aggravation of a previous eczematous condition. In Case IV death eventually supervened from diffuse suppuration of the left upper extremity, but this in no way resembled gummata in the tissues.

In Cases III and IV the internal organs were healthy, while in Cases I and II there was visceral tuberculosis. The only question which could arise as to gummata was in Case II. The spleen contained yellow masses under the capsule, about a quarter of an inch in diameter. In view of the fact that the other viscera were tuberculous, these growths were, however, probably large yellow tubercles.

If yaws is syphilis and has a tertiary stage one would expect to find gummata in the connective tissue, muscles, periosteum, and viscera. These lesions I have never found during a considerable experience of the disease both in and out of hospitals, nor have I seen anything to suggest a primary chancre such as is seen in syphilis.

Attempts to communicate the disease to animals and to isolate and cultivate a specific bacillus have failed in my hands. It must, however, be conceded that this failure—Lustgarten's bacillus notwithstanding—would equally be expected in the case of syphilis.

Lastly, the fact that yaws and syphilis yield to the same specific drugs cannot be regarded as an argument for their identity, for it is well known that arsenic will cure psoriasis, pemphigus, and some cases of malarial fever, diseases which apparently are even more widely separated than syphilis and yaws.—(*British Journal of Dermatology*, December, 1892.)

Case of Xeroderma Pigmentosum, with Post-mortem Examination.—Professor M'Call Anderson records a very extraordinary case of this rare disease in the *British Journal of Dermatology*, December, 1892. In its early stages it was reported in the *British Medical Journal*, 8th June, 1889. The boy, aged 9, was first seen in June, 1887, suffering from an eruption on face, neck, forearms, hands, legs, and feet. Seven years previously freckles made their appearance on face and neck, at first fading in winter and returning in summer, then becoming permanent and very dark. Then appeared (1) little reddish vascular spots, (2) cicatricial spots, and (3) some small warty-looking nodules. There were also some rounded nodules on the face, a few of which were papular, ulcerated, or covered with crusts; one appeared on inner side of left eyeball, was removed, returned, destroyed the eyesight, and finally necessitated enucleation of the eye. After a period of residence in hospital he went home not much altered in appearance, but in excellent general health. The further history of this case is worthy of full note:—

"He was re-admitted on 20th April, 1891. His general health was still good, but the disease had again become active. A fungating growth had appeared on the right side of the nose, near its tip, and there was a tumour about the size of a walnut in the substance of the right cheek, in front of the ear. During his stay in the infirmary this tumour became fluctuant and was opened, giving escape to a quantity of thick, creamy pus. The wound showed no tendency to heal, and the nasal growth, though checked for a time by the application of aristol, ultimately commenced to spread and to destroy the tissues. An indurated mass formed in the left side of the upper lip, ulcerated, and gave rise to similar fungous granulations, which also appeared in the edges of the wound upon the cheek. All three sores continued to spread and destroy the parts around them, that on the cheek extending backwards to the auditory meatus, and downwards below the ramus of the jaw. The tumour on the lip prevented the ingestion of solid food, and liquid nourishment could, after a time, be taken only with difficulty. A sinus formed between the nasal and oral cavities, and the upper lip sloughed away from the alveola on the left side, forming a large pendant flap which interfered with breathing and eating. It was therefore removed, as were the incisor teeth, which lay loosely in their sockets. Emaciation now set in, and progressed *pari passu* with the progress of the ulcers. The palatal and superior maxillary bones were attacked, and on the right side the ramus of the jaw and the carotid artery were laid bare. The freckles upon the neck, arms, and legs, meanwhile, remained in the same condition as before. By the end of April, 1892, the two anterior ulcers had completely coalesced so as to form one large triangular excavation, extending from slightly above the root of the nose to the lower lip. The nose and upper lip had completely disappeared, leaving the naso-oral cavity exposed to view. The edges of the ulcer were much indurated, red, and protruding considerably above the surrounding skin, which was infiltrated for a considerable distance. Its floor was irregularly eaten out, and exuded a dirty-yellowish and foul-smelling pus. The ulcer upon the cheek presented similar characters, involving the external meatus, the zygoma, and the ramus of the jaw. Some time previously an abscess, which had formed behind the right ear, was opened and drained. The patient gradually became more and more emaciated, and died on 26th September, at the age of 13, from a slight hæmorrhage from one of the small vessels of the neck. To the end there were no head symptoms, nor was there any rise of temperature.

"The autopsy, which was conducted with great care, yielded the following results:—The two ulcerating cavities had coalesced to form one huge excavation, the greatest depth of which in the face was about an inch and a half, in the neck about three-quarters of an inch. The destruction involved the external auditory canal and the lower portion of the temporal bone, the zygoma, which had entirely disappeared, the posterior half of the lower jaw, including the condyles, the palatal and the superior maxillary bones. In the upper part of the floor of the ulcer, behind the right orbital plate, there was an opening admitting the point of the finger, into which a probe passed easily one inch upwards and three inches in a backward direction.

"The membranes of the brain were œdematous. On the removal of the brain, the anterior part of the under surface of the temporo-sphenoidal lobe was found to communicate with the floor of the ulcer through the above aperture. Almost the entire floor of the middle fossa was ulcerated away, and the membranes were firmly adherent round the gap, limiting the extent of suppuration in the brain substance. Suppuration did not involve the lobe deeply. There was no infiltration in other parts of the brain or membranes. The gap in the middle fossa measured 2 inches by 1½ inch. There was also a large gap in the lower part of the frontal bone, measuring 1½ inch by 1 inch. The anterior part of the ethmoid and of the nasal bones was destroyed. The left optic nerve was atrophied and soft as compared with the right (the corresponding eye had been enucleated in 1887).

"There was no lesion in any of the other organs.

"*Remarks.*—This case, which was almost continuously under my observation for several years, is a typical illustration of an interesting and very rare form of disease. Not more than sixty cases have been recorded up to the present time, and as many of them occurred in several members of the same family, the number of families in which it has been met with is very small indeed. In most cases, when more than one child is affected, the sex of the patient is the same; but my patient's sister was similarly affected, although she was cut off by an intercurrent disease.

"One of the most remarkable features of the complaint is its apparently innocent and trivial appearance during the earlier years of its existence, in strong contrast with its terrible character as the fatal issue slowly, though relentlessly, approaches; for I do not think that I have ever encountered such widespread and ghastly destruction as this poor boy's face presented during the last month of his illness (as shown by the accompanying photographs). It is particularly to be noted that the general health remained unimpaired during the greater portion of the illness, and only began to fail when the destruction of tissue becomes extensive, the two conditions progressing *pari passu.*

"Different opinions have been expressed with regard to the nature of the new growths, and possibly it may be that they are not identical in every case; but, in my case, there can be no doubt that they were typical illustrations of epithelioma. It is difficult to see what connection there can be between the pigmentary stains with which the disease commences and the malignant growths which ultimately destroy life, although we know that pigmentary moles are rather prone to become epitheliomatous in advancing years.

"I was much interested in the results of the *post-mortem* examination, thinking it highly probable that similar growths would be met with in some of the internal organs, although there were no symptoms of such a condition during life; but I was surprised to find that the other organs and tissues of the body were unaffected."

Favus Contagion from the Lower Animals. Dr. S. Sherwell. (*American Veterinary Review*, November, 1892.)—Dr. Sherwell relates some interesting cases of favus communicated from mice. In one instance four members of one family were affected, having evidently been infected from pet dogs, one of which had previously been found playing with a sick mouse, which, from the description, was affected with severe favus eruption. Some of the mice were caught, and on microscopic examination the achorion was evident. Dr. Sherwell says that the irritation in mice is so great that he has found the calvarium destroyed by scratching, and the parasite affecting the brain and its membranes. He also relates instances of ringworm infection from kittens. After mentioning the treatment by iodide of sulphur with alkalies, he suggests, as an after treatment, constant saturation with raw linseed oil and frequent washings with tar soap, believing oils to be parasiticide by preventing oxygenation of the moulds.

Ointment for Chilblains.—

℞.—Menthol,	1 part.	
Salol,	2 parts.	
Ol. oliv.,	20 ,,	
Lanolin,	60 ,,	M.

—(*Union Méd. et Journ. de Mal. Cutan.*, November, 1892.)

Ointment for Chronic Urticaria in Children.

℞.—Chloral hydrat., Pulv. camphoræ, Pulv. gum arabic,	āā 5 parts.	
Ungt. cetacei,	40 ,,	M.

—(*Union Méd. et Journ. de Mal. Cutan.*, November, 1892.)

DISEASES OF THE EYE.

By FREELAND FERGUS, M.D.

Since our last communication to the editors of this *Journal*, probably the most important event in the British ophthalmic world has been the appearance of a new edition of Dr. Berry's book. We have not yet had time to read it through; but, turning to those parts on which Dr. Berry is a recognised authority, we find them full and extremely good. If possible, this edition is even of greater merit than the last, and before long we hope to give to the readers of the *Glasgow Medical Journal* a more extended account of its contents.

Ophthalmic Hospital Reports (Part III, Vol. XIII).—Probably the most important paper in its contents is one on the diagnostic value of the loss of the pupillary reaction to light, by Dr. W. A. Turner.

The author commences by giving some hints as to how the examinations should be conducted. "The light ought not to be more intense than the eye is usually accustomed to, hence diffuse daylight is better than that thrown from a mirror." Again—"All errors associated with accommodation and convergence must be carefully eliminated."

Next, examples of the following series of cases are given:—

1. Cases in which the Argyll-Robertson pupil occurred without loss of the knee-jerks.

Most of the cases described under this heading had other manifestations of nerve lesion, and in some of them the knee-jerks were only obtained by the augmentation method. Amongst the lesions noticed were, in one case, paralysis of the right external rectus, with slight drooping of the left upper eyelid. Several others had diplopia and even ptosis.

2. Cases exibiting the Argyll-Robertson phenomenon on one side only.

(*a*) Without other symptoms of nervous disease.
(*b*) With symptoms of mixed sclerosis.
(*c*) In general paralysis of the insane.

The two cases described under section (*b*), and the case described under section (*c*), had the Argyll-Robertson pupil on one side only. The eldest child of one of the patients mentioned under (*a*) had paralysis of the right side following infantile convulsions, while another child had interstitial keratitis, and a third had thrush.

3. Cases exhibiting Argyll-Robertson pupil associated with atrophy of the optic nerve, but without loss of the knee-jerks.

From these series Dr. Turner endeavours to answer the question as to how far they indicate the actual presence or future onset of progressive degenerative central changes. To answer this question, he first points out that such phenomena may be due to alterations or degenerations in—(1) "the peripheral nervous apparatus or muscular structure of the iris; (2) in the afferent or efferent limbs of the reflex arc; (3) in the central mechanisms situated in and around the grey matter of the Sylvian aqueduct."

Almost excluding changes in the iris itself, apart from adhesions, the author discusses at some length the other situations which may be altered.

Arranging all the cases into a table, he shows that in two cases the adducens oculi was paralysed, but *without loss of accommodation*, showing that the ciliary fibres had escaped. Two cases are noted as having whitish discs; but, as the vision was very fair, the afferent end of the arc may be excluded. In two cases, which Dr. Turner regards as specially important, there was complete paralysis of the right third nerve, with Argyll-Robertson pupil in the other eye. The paralysis, however, passed off under treatment, although the pupillary reflex did not improve. From this the conclusion is drawn that the affection of the pupil was of central origin, whilst the palsy of the third was a concomitant peripheral paralysis.

In only three of the cases was there no direct evidence of central disease; in two of these cases the patient was only seen on one occasion, and in one the condition was due to syphilis.

The conclusions arrived at are the following:—

"1. That the state of the pupil known as the Argyll-Robertson phenomenon, existing by itself either on one or both sides, although not diagnostic, is highly suspicious of the presence of an early progressive degenerative lesion in the upper portion of the central nervous apparatus.

"2. Its presence ought to suggest the possibility of other symptoms which may require careful investigation."

Amongst such symptoms we note partial anæsthesia of the trigeminal nerve.

Another paper of great importance is on pseudo-glioma by Mr. Treacher Collins. Between the years 1888 and 1892 twenty-four eyes were removed for glioma, and in seven of these subsequent examination did not confirm the diagnosis. Such cases are included under the heading of pseudo-glioma.

Under this heading are to be included—

1. Cases of persistence and thickening of the posterior part of the fœtal fibro-vascular sheath of the lens, with or without persistent hyaloid artery.
2. Extensive tuberculosis of the choroid.
3. Cases of inflammatory effusion into the vitreous, subsequent to retinitis or cyclitis, in most cases accompanied by separation of the retina.

Mr. Collins discusses at some length the points of importance in the diagnosis of each condition. We are content to draw attention to the matter, for to do the matter justice would require almost a verbatim reprint.

Books, Pamphlets, &c., Received.

Atlas of Clinical Medicine, by Byrom Bramwell, M.D. Vol. II, Part II. Edinburgh: T. & A. Constable. 1893.

Clinical Lectures on Abdominal Hernia, chiefly in Relation to Treatment, by Wm. H. Bennett, F.R.C.S. With 12 Diagrams. London: Longmans, Green & Co. 1893.

The Leeward Islands Medical Journal, edited by H. A. Alford Nicholls, M.D., F.L.S. London: J. & A. Churchill. 1892.

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ORIGINAL ARTICLES.

HEROPHILUS AND ERASISTRATUS.

[*A Bibliographical Demonstration in the Library of the Faculty of Physicians and Surgeons, Glasgow*, 16*th March*, 1893.*]

By JAMES FINLAYSON, M.D.,

Honorary Librarian to the Faculty of Physicians and Surgeons, Glasgow; Physician to the Glasgow Western Infirmary, and to the Royal Hospital for Sick Children, Glasgow.

At our former bibliographical demonstrations the various works of the authors discussed were brought before you; but how is such a demonstration to be conducted in this case, when not a single work of either of our authors has come down to us? On the table before you there is a collection of the various works in which fragments of Herophilus and Erasistratus are preserved, or in which references to their works and their opinions have been traced. First in size, and also in importance, are the twenty volumes of Galen; next come Cælius Aurelianus, Rufus the Ephesian, Soranus the Ephesian, Dioscorides, and Aetius. These are all medical writers. On the other side of the table are placed the works of classical authors who were not physicians; one or two of these are represented on the table by MS. extracts, to save the trouble of bringing from the University Library large volumes containing but slight references to the business we have on hand. Amongst these classical authors we have Celsus, Pliny, Plutarch, and Aulus Gellius, as the chief; then Sextus Empiricus, Stobæus, the Emperor Julian, Macrobius, Athenæus, Diogenes Laertius, Suidas, and Strabo. Tertullian, the early Christian writer, may also be included in this list. These are the original sources from which all our information as to the the two great physicians is derived. I have placed on a separate table various books referring to our authors, including general works on medical history and biography, and special memoirs or articles on the subjects dealt with.

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* In the preparation of this paper I am much indebted to Dr. Barclay Ness, Dr. A. W. Russell, Dr. J. H. Carslaw, Dr. Jones, and some others, for writing out extracts, making and comparing translations, looking up references, &c.

THE ALEXANDRIAN SCHOOL.

The first question to be dealt with is—Why are Herophilus and Erasistratus so constantly named together, both by ancient and modern authors? It is because they were the founders of the great Alexandrian School of Anatomy and Medicine, and flourished there about the same time. The Alexandrian School of Literature, Philosophy, and Science, founded and fostered by the Ptolemies, has been termed "The First University,"* and in a sense it was so. A "university," as its name implies, is a collective body of teachers and students; in Alexandria this coalition was favoured by the inducements offered to leading men, in all departments of knowledge, to settle there, and by the collections in the libraries and museums which the genius of Aristotle had incited his pupils to bring together.

Egyptian medical papyri, .	16th to 12th century B.C.	
Hippocrates, ...	460-357 B.C.	
Aristotle, ...	384-322 B.C.	
City of Alexandria founded, . .	332 B.C.	
Ptolemy Soter, ...	reigned 323-285 B.C.	
Herophilus ('Ηρόφιλος), Erasistratus ('Ερασίστρατος), Euclid,	In Alexandria, and flourished about	300 B.C.
Septuagint Version of Hebrew Scriptures from	280 B.C.	
Seleucus Nicator, King of Syria, died about	280 B.C.	
Celsus, the medical writer, . .	about Christian era.	
Pliny (the author of *Historia Naturalis*),	23-79 A.D.	
Dioscorides, ...	second century A.D.	

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* See a short interesting sketch in the *Westminster Review* for September, 1892, entitled "The First University," by Mr. V. E. Johnson.

Rufus Ephesius, lived in reign of Trajan,	98-117 A.D.
Soranus Ephesius, lived in reign of Trajan and Hadrian,	98-138 A.D.
Aulus Gellius, lived in reign of Hadrian, Antoninus, and Marcus Aurelius,	117-180 A.D.
Galen,	128 or 130-200 A.D.
Tertullian, one of earliest Christian writers,	160-240 A.D.
Cælius Aurelianus,	4th century A.D.
Aetius,	5th or 6th century A.D.

I have drawn up a table with various dates to guide our ideas of the authors and times to be dealt with to-night. The first entry refers to the subject of our last demonstration, when facsimiles of the medical papyri of the ancient Egpytians were shown.* The oldest of these goes back to the 15th or 16th century before Christ. In view of these and other records of ancient Egyptian learning, we may hesitate to admit the claim of the Alexandrian School to be regarded as "The First University." In Thebes and in Memphis, for one or two thousand years before the time of the Ptolemies, there were great centres of learning in the colleges of the priests: the medical papyri indicate this themselves, but in other departments, where the difficulties were less formidable, the learning of these ancient colleges is perhaps more conspicuous. In the case of Alexandria, however, with its libraries and museums, accessible to students of all classes and nationalities, with anatomists practising dissection of the human body and supplying names still current in our text-books, and with Euclid laying down his propositions very much as they are still taught in our schools, we may fairly admit that it was the first *modern* university. The story of this school is given in the work I show you: "*Histoire de l'école d'Alexandrie*, par M. J. Matter, 2^{e} édition," 2 vols., Paris, 1884. Only a small portion of this work (pp. 19-41) is taken up with the *medical* school. This portion of the subject is dealt with in another book, which I have been unable to procure—viz., Beck (Christian Fried. Hen.), "*De schola medicorum Alexandrina commentatio*," 36 pp., 4to., Lips., 1810. Kühn also, in his *Opuscula Academica Medica, et Philologica*, Lipsiæ, 1828, Tom. II, has an important article, "Scholæ Medicæ Alexandrinæ Historia"; but, unfortunately, it is only a fragment, as "pars prima" seems to be all which has appeared. So far as it goes it has great value. In the treatises on the History of Medicine by Le Clerc, Sprengel, Haeser, Bouillet, and others, the Alexandrian School is pretty fully discussed.

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* Reported in *British Medical Journal*, 8th April, 1893.

Was Herophilus or Erasistratus the older? When named together, we sometimes hear of Herophilus and Erasistratus, sometimes of Erasistratus and Herophilus. The question arises which was the earlier in Alexandria? or which was the older? In his academical discourse just mentioned, Kühn takes up this question pretty fully, stating the contradictory views which have been advanced, and indicating the arguments which are adduced in support of them. It seems beyond dispute that they both flourished in the time of Ptolemy Soter, but it is possible that, although of nearly the same age, one may have been there before the other. Perhaps the bare statement of Kühn's opinion, given at the end of his paper, may suffice for us at present. He says, "I entirely agree with those who consider Herophilus the older. The reasons which moved me to adopt this opinion I will explain on a future occasion." But unfortunately the sequel appears never to have been published. So far as I can judge, we may say that it is probable that Herophilus had already begun his original work before Erasistratus; that it is quite possible that they were associated with each other in certain anatomical inquiries; and that it is quite certain that, when Erasistratus was well advanced in years, he withdrew from practice and devoted himself to anatomical studies, which led him to correct not merely many of the opinions of Herophilus, but many of his own earlier conclusions. By this return to anatomical work in his later years, the interval between Herophilus and Erasistratus is perhaps made to look greater than it would otherwise have been.

CHARGE OF HUMAN VIVISECTION AGAINST HEROPHILUS AND ERASISTRATUS.

The names of Herophilus and Erasistratus are often coupled also in another connection—namely, in the grave charge of their dissecting living men. The charge seems to rest entirely on the authority of Celsus and of Tertullian. The latter uses, as is his wont, such violent language, that if it stood alone it might almost be ignored, as it carries with it the suggestion of exaggeration and animus. He says (*De Anima*, cap. x):—

"Herophilus, that Physician, or Butcher [*aut lanius*], who dissected six hundred persons in order that he might scrutinise nature: who hated man in order that he might gain knowledge: I know not whether he explored, clearly, all the internal parts of man: for death itself would change them from their state when alive, and, in his hands, not a simple death, but one leading to error from the very process of cutting up."

In another passage (*De Anima*, cap. xxv), referring to methods of forcible delivery which involved the death of the infant, either in the process or before it was begun, he singles out Herophilus, from amongst others whom he names, as "the dissector of adults also," and he contrasts him, apparently, with "the milder Soranus" (*et majorum prosector Herophilus, et mitior ipse Soranus*).

Very different in tone, but equally clear as to the nature of the accusation, is the passage in Celsus:—

> "As pains and various other disorders attack the internal parts they believe no person can apply proper remedies to those which he is ignorant of: and, therefore, that it is necessary to dissect dead bodies and examine their viscera and intestines, and that Herophilus and Erasistratus had taken far the best method for attaining that knowledge, who procured criminals out of prison, by royal permission, and dissecting them alive contemplated, while they were even breathing, the parts which nature had before concealed, considering their position, colour, figure, size, order, hardness, softness, smoothness, and asperity; and that it is by no means cruel, as most people represent it, by the tortures of a few guilty, to search after remedies for the whole innocent race of mankind in all ages" (Lib. I, Procem).

After stating the opposite views and balancing the arguments, as was his custom, he sums up in favour of dissecting the dead, and against dissecting the living: "*Incidere autem vivorum corpora, et crudele et supervacuum est: mortuorum discentibus necessarium.*"

The ingenuity of medical critics has been exerted to the utmost in trying to break down these definite charges. It has been pointed out that neither of them proceed from medical men; and the authority of Quintilian (*Inst. Orat.*, xii, 1, "Mediocri vir ingenio") has been invoked to disparage Celsus as a writer. Further, it has been shown that Herophilus and Erasistratus undoubtedly practised dissection of human bodies in Alexandria (*Galen*, Kühn's edition, Tom. II, p. 895; Tom. V, p. 603); that this was quite an innovation, and a practice likely to excite, from its novelty, much adverse sentiment; that later and even modern experience shows how prejudice against dissection excites false rumours and calumnies; that the practice of human dissection seems, even in the time of Galen, to have been almost limited to

Alexandrian students; that through the fostering care of Ptolemy the anatomists there may, indeed, have been favoured with the bodies of criminals, but only after the executioner had done his official work, and that this fact might readily give rise to the scandal. All this is plausible enough, and quite probable, but not very conclusive. Even less conclusive is the argument based on the ignorance of these great anatomists as to the arteries containing blood—a point which one might imagine could have been cleared up by vivisection; but as this error continued till the time of Galen, notwithstanding the dissection of living animals, this argument may be put aside. More weight must be attached to the argument based on the silence of all the physicians whose works have survived, by none of whom, apparently, is human vivisection hinted at; but more particularly is the silence of Galen important, as he was himself a skilled anatomist, and amongst his voluminous writings there is a special book, now lost—*De vivorum anatome.* As an anatomist he had, usually, to content himself with pigs, monkeys, and other animals, only getting occasional chances of studying human anatomy; but he refers repeatedly to human dissections by Herophilus and Erasistratus. If Galen had *approved* of human vivisection, as he did of dissecting the human body after death, he could scarcely have failed to refer to the practice of it by the great Alexandrian anatomists, if he had regarded the rumours current in the time of Celsus, and continued to the time of Tertullian, as anything more than vulgar reports. If, on the other hand, he *disapproved* of human vivisection, one can scarcely think of his missing a chance of casting it up against either or both of these great anatomists, as it is evident from his writings that he had no warm side to Erasistratus in particular. As Dr. Greenhill* says, the silence of Galen on this matter is the strongest argument against the clear and calm statement of Celsus.

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* "Perhaps the strongest argument against the truth of the story is derived from the silence of Galen, who so expressly mentions his dissecting human bodies. It is curious, too, that the same accusation is brought against Archigenes, and Galen himself, by one of the later commentators on Hippocrates (Joannes Alexandrinus, in Dietz's *Scholia in Hippocr. et Gal.*, Tom. II, p. 216), from which it would almost seem that the story was applied to Herophilus, Erasistratus, Archigenes, or Galen, quite at random: for, without stronger and more positive evidence, we are hardly called upon to believe it of them all. It may be noticed that Galen's lost work, Περὶ τῆς ἐπὶ τῶν Ζώντων 'Ανατομῆς, *De vivorum dissectione* (Galen, *De ordine librorum suorum*, Tom. XIX, p. 55), related to the vivisection of animals and not of man" (Dr. Greenhill, review of Marx's Herophilus, *Brit. and Foreign Med. Review*, vol. xv, 1843, p. 109, footnote).

Cocchi (*De usu artis anatomicæ Oratio*, Florentiæ, 1761) marshals the arguments against the credibility of the charge with much ability and at great length; but a dispassionate perusal of his pleadings fails to show anything stronger than is indicated above.

Both Herophilus and Erasistratus left ardent disciples behind them, constituting the rival schools of the *Herophilites* and the *Erasistrateans*, who continued to dispute, and to hold sway between them, till after the time of Galen, whose authority soon became supreme. But I do not enter on this subject.

Ἡρόφιλος : Ἠρόφιλος ; HEROPHILUS ; EROPHILUS ; TROPHILUS ; HIEROPHILUS (?).

With the above variations, this great anatomist is named in different passages. The mere absence of the aspirate, whether in Greek or Latin, need not surprise us as a variation. The name Τρόφιλος occurs in Stobaeus in connection with a saying quoted there as the answer of a physician; this will be subsequently given in full. It is now supposed, with great probability, that the letter T has been substituted for H in the process of copying, as no physician is known to us under the name of "Trophilus," and the one referred to in the passage was evidently regarded as a great authority.

The last name in the above list is more doubtfully received as applying to our great anatomist, although it is admitted that a variation from *Her*ophilus to *Hier*ophilus is a very likely error to be made by the copyist.

AGNODICE AS A PUPIL OF HIEROPHILUS.

It is generally supposed that it was another physician named Hierophilus, and not the Alexandrian anatomist, who is referred to in the amusing tale narrated by Hyginus,* which rests apparently on his authority alone. It shows that the lady-medical question is an old one :—

> "The ancients had no midwives; and so many women, from their natural modesty, actually died; for the Athenians had a law prohibiting women and slaves from studying medicine. But a certain girl, named Agnodice, desired to learn medicine, so cutting off her

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* C. Julii Hygini, Augusti Liberti, *Fabularum Liber*. Lugduni, 1608, Fab. 274, p. 52.

hair, and assuming male attire, she betook herself to one Hierophilus (*cuidam Hierophilo*) for instruction. After she had learnt the art, hearing that a woman was in labour, she went to her and was proceeding to examine her (*ab inferiore parte veniebat*); but the woman believing that Agnodice was a man, was unwilling to be treated by a male, whereupon she divulged her sex (*illa, tunica sublata, ostendebat se fœminam esse*), and proceeded to the relief of the patient. But the physicians, finding that they were now no longer admitted to the female patients, began to accuse Agnodice, saying that the patients' morals were being corrupted, the patients merely simulating illness. When, therefore, the judges of the Areopagus assembled, they began to condemn Agnodice, to whom, in defence, she divulged her sex (*tunica*, &c.) But the physicians began to accuse her more strongly than ever for violating the laws, whereupon the leading women came to the council, and said to the judges, 'Oh men! you are not husbands, but enemies: because you condemn her, who has brought health and safety to us.' Then the Athenians changed the law, so that free-born women might learn medicine."

Although the tale is accepted by Dr. Marx as applying to Herophilus of Alexandria, this is not admitted by Dr. Greenhill, or by Fabricius, or by Le Clerc. Dr. Greenhill suggests that "Cuidam Hierophilo" is not a likely phrase to be used in naming the renowned anatomist—that the story (if true at all) seems to refer to a much more remote period than 300 B.C., and that it has not been shown to be probable that Herophilus was at Athens, or Agnodice at Alexandria.

BIRTHPLACE AND TEACHER.

Herophilus was born in Chalcedon in Bithynia, as testified by various authorities (see *Galen*, Kühn's edition, Tom. XIV, p. 683); but, apparently from the similarity of the Greek word for Carthage, he is represented in one passage in Galen as a Carthaginian (Καρχηδονίῳ instead of Χαλκηδονίῳ; see Galen, Kühn's edition, Tom. III, p. 21). His teacher was Praxagoras, a celebrated physician in Cos,* so that Herophilus, through him, inherited the traditions of that great school made famous by Hippocrates. In passing, I may refer to a pretty elaborate account of Praxagoras of Cos, given by Kühn in his *Opuscula Academica Medica, et Philologica*, Tom. II, "Commentatio de Praxagora Coo," I, II, III, pp. 128-149. In this series of papers much information and many references are given.

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* Galen, Kühn's edition, Tom. X, p. 28.

MEMOIR ON HEROPHILUS BY MARX.

The bibliographical difficulties attending the study of the life and writings of Herophilus have been practically overcome by the labours of Marx. There is a little treatise, which I show you in German, entitled "HEROPHILUS: Ein Beitrag zur Geschichte der Medicin von Dr. K. F. H. Marx:" Carlsruhe und Baden, 1838. The first 55 pages give an account of the great Alexandrian Anatomist and his works, with every authority and source of information referred to in notes: these notes consist of 47 pages, and they contain not mere references, but actual passages quoted from Galen and other authors where the fragments are preserved. In this way, we have the whole subject put before us with great fulness and compactness. Another form of the work, subsequently published, is in Latin: but I have not been able to get a copy to show you: the title runs "De Herophili Celeberrimi Medici Vita Scriptis atque in Medicina meritis, Auctore Car. Frid. Hen. Marx:" Gottingæ, 1840, 4to, pp. 60. We have the advantage of an interesting review of this from the pen of Dr. Greenhill in the *British and Foreign Medical Review*, vol. xv, 1843; there is also the article on "Herophilus" by the same author in *Smith's Dictionary of Biography and Mythology*, so that we have in English a very good account of Marx's book with the results of his inquiry, and a few additions and criticisms by the reviewer.

HEROPHILUS AS A PHILOSOPHER AND DIALECTICIAN.

Hippocrates is credited with having separated Medicine from Philosophy, of which it had, up till his time, formed a part: but in the stately introduction to the Aphorisms, and in the whole tenor of his writings, one can never forget that Hippocrates himself was a philosopher. Even in the time of Galen, 500 years later, we find this great medical genius, versed in logic, writing many philosophical treatises, and, above all, writing a special book entitled, "The best Physician also a Philosopher" (Ὅτι ἄριστος ἰατρύς καὶ φιλόσοφος).

Herophilus was doubtless well entitled to this name also. In one passage preserved by Stobæus we find an utterance of profound wisdom which is as applicable to us, after 2,000 years, as in his own time:—

"Herophilus (Trophilus), the physician, being asked who was the most perfect physician, repiled, He who can discriminate between what is possible and what is impossible." *

Another short passage preserved by Sextus Empiricus from the treatise on "Dietetics" by Herophilus, although rather difficult to translate nicely, shows great elegance in expressing his views on the importance of health. It reminds one slightly of the motto of the Faculty in whose library we are met—"Non vivere sed valere vita." † The passage, as given by Sextus Empiricus, may be rendered thus:—

"Herophilus says in the *Dietetics* that Science and Art have equally nothing to show, that Strength is incapable of effort, Wealth useless, and Eloquence powerless, if Health be wanting." ‡

Galen `refers to Herophilus as an expert in dialectics (*Herophilum illum dialecticum*, Kühn's edition, Tom. X, p. 28), but the following story seems to show him as one who could laugh at the refinements and subtleties of the philosophers. The old problem as to the impossibility of motion is stated in various terms by Sextus Empiricus, but I select the following (edition of Fabricius, 1840, p. 199, *Pyrrhon. Hypothes.*, Lib. II, cap. 22), as it immediately precedes the story about Herophilus; the one paragraph is numbered 242 and the other 245. The solution of the problem preserved in our current phrase, "solvitur ambulando," affords, as Dr. Greenhill says, scarcely such cogent proof as the method pursued by Herophilus! The Diodorus referred to as versed in these absurd discussions is the one known as Diodorus Cronus. One story is that he received this name in banter from Ptolemy, because he could not, on the spot, solve some dialectic problem which had been raised, but required time to do so. He felt the nickname so keenly that he is said to have gone home and, writing out an elaborate solution of the problem, died in despair. This is the philosopher who was in the habit of arguing as follows:—

"§ 242. If anything be moved, it is moved either in the place in which it is, or in the place in which it is not; but it cannot be in the place where it is, for if so, it would remain there; neither can it be in the place where it is not, for how can a thing act where it is not? Therefore, it is not moved at all. . . .

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* *Stobæi Sententiæ*, Gesner's edition, Basileæ, 1549, De Medicis, Sermo C, p. 549: Τρόφιλος ἰατρός ἐρωτηθεὶς τίς ἂν γένοιτο τέλειος ἰατρός, ὁ τὰ δυνατὰ, ἔφη, καὶ τὰ μὴ δυνατὰ δυνάμενος διαγινώσκειν.

† Martial's *Epigrams*, vi, 70.

‡ Sextus Empiricus, *Adversus Ethicos*, Lib. xi, § 50: Ἡρόφιλος δὲ ἐν τῷ Διαιτητικῷ καὶ σοφίαν φησὶν ἀνεπιδεικτον καὶ τέχνην ἄδηλον καὶ ἰσχὺν ἀναγώνιστον καὶ πλοῦτον ἀχρεῖον καὶ λόγον ἀδύνατον, ὑγείας ἀπούσης.

"§ 245. A good story is told of Herophilus the physician: for he lived at the same time as Diodorus, and exposed the sophistry of the arguments which he brought forward in those absurd dialectical conflicts against many things, especially motion. For when on one occasion Diodorus had dislocated his shoulder and came to Herophilus to be cured, he said, with a laugh, 'Your shoulder has become dislocated either in the place in which it was, or in the place in which it was not; but neither was it in the place in which it was, nor yet in the place in which it was not; therefore, it was not dislocated at all.' At last the Sophist besought him, that, laying aside all these quibbles, he should from his medical art apply the remedies suitable for the case."

TABULAR VIEW OF THE WORK OF HEROPHILUS.

Dr. Marx says, "The following table may serve as a summary of all the matter which is discussed or mentioned in the extant fragments of Herophilus:—

"EXPLANATION OF SEEMINGLY AMBIGUOUS EXPRESSIONS OF HIPPOCRATES (one of his works).

"COMMENTARY ON THE APHORISMS OF HIPPOCRATES (one of his works).

"ANATOMY (one of his works):

"*Dissection* of human bodies: vivisection: preparation of the body for investigation: Darsis.

"*Of the Nervous system.*—Distinction of cerebrum and cerebellum: cerebral membranes: blood-sinuses: plexus: ventricles of the brain: calamus scriptorius: cranial nerves: spinal nerves: sensory nerves: optic nerves: nerves of the heart: coats of the eye.

"*Of the Vascular system.*—Distinction between arteries and veins: thickness of the arteries: pulmonary artery: structure of the heart: origin of the arteries: mesenteric veins: transition of veins into glandular bodies (lacteals?).

"*Of the Glands.*—Salivary glands: pancreas.

"*Of the Bowels.*—Duodenum.

"*Of the Liver.*—Comparison of the human liver with that of animals: description: abnormalities in shape and position.

"*Of the Male and Female Organs of Generation.*—Blood vessels of the testicles: epididymis: spermatic duct: seminal vesicles: form of the uterus, its blood vessels: varying position of the cervix: statement as to the os uteri: ovaries, description of them: comparison with animals: Fallopian tubes.

"*Of the Bones.*—Hyoid bone: tibia.

"PHYSIOLOGY.—Seat of the soul: nature of dreams: general vital power: perception and will-power: respiration: circulation of blood:

influence of the heart: contraction and dilatation of the arteries (pulse): formation of semen: secretion of milk: movement of the fœtus.

"GENERAL PATHOLOGY AND THERAPEUTICS. — About health, sickness, and medical science: feeble body-condition (debility): humoro-pathological view as to causes (one of his works): general blood-letting: ligature.

"DIETETICS (one of his works).—Value of health: about ways of living: about the power of foods: gymnastics.

"SEMEIOLOGY.—Importance of the study of semeiology: fore-knowledge and fore-telling: commentary on the Prognostics of Hippocrates (one of his works): the passage of worms: investigations on the pulse (one of his works): distinction from cardiac palpitation: variations of pulse as regards amplitude, speed, and rhythm: reasons for the strong pulse: large, full, narrow, quick, ant-like, regular, irregular, jerky, double beating (dicrotic), undulating, and worm-like pulse: On the rhythm of the pulse (one of his works?): Intervals, pauses, times, measures of the pulse: Behaviour of pulse in different stages of life.

"PHARMACOLOGY.—Medical remedies as a whole: efficacy of remedies: necessary knowledge as to their mode of action: classification: preference for those from vegetable kingdom: administration of large doses of the root of green hellebore: compound remedies.

"SPECIAL PATHOLOGY AND THERAPEUTICS.—Examination of patients: cures (one of his works): cause of sudden death: death from the extraction of a tooth: different kinds of paralysis: tremor: spasm: tetanus: on the eyes (one of his works): nyctalopia: bloody-flux: treatment of hæmoptysis by salt.

"SURGERY.—Reduction of dislocations: healing of ulcers: difficulty in healing round ulcers.

"MIDWIFERY.—Instruction: os uteri in pregnant and non-pregnant condition: death of the fœtus."

For an account of the anatomical discoveries and the medical views of Herophilus, the works of Haller, Sprengel, and Le Clerc may be consulted.

WORKS OF HEROPHILUS ACCORDING TO DR. MARX.

"The titles of his written works from which individual passages are quoted, or otherwise mentioned by the Ancients, are the following:—

"1. ON CAUSES: probably a comprehensive etiological work which explained the anatomical and physiological causes of diseases, along with remarks on their treatment, from personal observation. From this, not long ago, an important fragment was published by Antonio Cocchi, from a written Commentary of Apollonius of Citium (a contemporary of Mithridates) on a work of Hippocrates on *The*

Joints, which commentary is to be found in the collection of Greek Surgeons in the medical library of S. Lorenzo in Florence. This fragment is interesting both on account of its contents and because it gives a sample of the statements and style of writing of Herophilus. I shall give it afterwards,* in full, along with the collection of the fragmentary writings of our author still extant, and previously known to me (Cocchi: '*Dell' Anatomia,*' Firenze, 1745).

"2. ANATOMY: in all probability the principal work of Herophilus; the 2nd and 3rd books of this, indeed several large parts, are quoted from by Galen, and he has certainly made constant use of it in his work on 'The Practice of Anatomy.'—(*Galen*, Kühn's edition, Tom. II, p. 571; Tom. IV, p. 596).

"3. INQUIRIES ON THE PULSE: of this Galen mentions the 1st and 3rd books, opposes many of the theories contained in it, and refers to a work of his own thereon, either not published or no longer in existence.—(*Galen*, Kühn's edition, Tom. VIII, pp. 716, 724, 956; Tom. IX, p. 279).

"The Tarentine Heraklides had also composed a refutation.

"The passage *on Rhythms* formed, it is supposed, a special part of the general teaching of Herophilus on the Pulse.

"4. CURES: the first book of this is mentioned by Cælius Aurelianus, who probably got a large part of his treatise from it (Cælius Aurel., *Morb. Chron.*, Lib. ii, cap. xiii). He also used specially to mention the fact, in the case of many diseases, if he found nothing about them in Herophilus.

"Probably the work mentioned here is the same which Galen mentions under the name 'Therapeutic Treatises,' in which the discourse is on the use of Medicines.

"5. COMMENTARY ON THE PROGNOSTICS OF HIPPOCRATES: this work consisted in part of explanations, and in part of statements of opinions which were opposed to those of the old master.—(*Galen*, Kühn's edition, Tom. XVIII B, pp. 16, 29).

"6. ON THE EYES: a work which, treated as is supposed of these organs anatomically, pathologically, and therapeutically.—(Aetius: Tetrab. 7; or Quat. 2, Serm. 3).

"7. DIETETICS: of this a beautiful passage has been preserved (Sextus Empiricus, *Adversus Ethicos*, § 50).† Possibly it is this which may have come down to us from Herophilus under the title 'On the manner of living and the virtue of nourishing food,' and is still in existence, in manuscript, in the Imperial Library in Vienna.

"8. EXPLANATIONS OF SEEMINGLY AMBIGUOUS EXPRESSIONS OF HIPPOCRATES: this treatise is mentioned by Galen.—(*Galen*, Kühn's edition, Tom. XIX, p. 64).

"Erotian, in his explanation of Hippocratic words, cites in the preface several Herophilites (whom he distinguishes from the Empirics, for instance Philinus) who had furnished him with these explanations. Herophilus himself he names later on under a word signifying 'to be anxious,' and which he had wrongly interpreted 'to be confused.'

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* It is subsequently given and referred to in this paper also.

† Already quoted in this paper.

"9. COMMENTARY ON THE APHORISMS OF HIPPOCRATES: this work is not met with among the Ancients; we find it, however, recorded as extant in the collection of MSS. in the Ambrosian Library in Mailand (Montfaucon, *Biblioth. Bibliothecarum Manuscript. Nova*, Paris, 1739, Tom. I, p. 498)."

In addition to the above, Dr. Greenhill (*Brit. and For. Med. Review*, vol. xv, 1843, p. 110) gives other two works of Herophilus mentioned by Soranus (*De arte obstetrica morbisque mulierum*)—viz., *Contra Opiniones Vulgares*, and *De Arte Obstetricia* (Dietz, edition of Soranus in Greek, 1838, cap. viii, p. 21, and cap. xlviii, xciii, pp. 100, 211; see also Ermerins' edition of Soranus, with Latin translation and Greek text, 1869, p. 29 and pp. 192, 267).

EXTRACTS FROM HEROPHILUS.

Several extracts have been preserved by Galen and others. The following description of the liver is selected as a specimen of his anatomy; both it and the passage on the pulse are from Galen. The third extract, on dislocation of the hip-joint, is preserved by Apollonius, but some think it is really by one of the followers of Herophilus named "Hegetor," and not by Herophilus himself:—

Herophilus on the Liver (Marx, p. 29; *Galen*, Kühn's edition, Tom. II, p. 570).—"The liver of man is very considerable, and large in comparison with that of other animals of similar size. Where the diaphragm comes in contact with it, it is elevated and smooth, but where it comes in contact with the stomach and its vault, it is bent inwards and uneven. It has the form of a cleft where the umbilical vein enters it in the fœtus. It is not alike in all: in breadth, length, thickness and height, in number of lobes, in ruggedness in front where it is thickest, in the protuberances on its circumference where it gets thinner, it varies in different individuals. In some it has no lobes, but is quite round and even, in others it has two, in others three, and in many even four."

Herophilus on the Pulse (Marx, p. 40; *Galen*, Kühn's edition, Tom. VIII, p. 498).—"The pulse," so teaches Herophilus, "is a dynamic oscillation, which arises out of the natural action of the heart and of the arteries, and is quite different, in kind, from the movements which might have their origin in other systems, appearing as trembling and spasm, to which even the heart, with its vessels, might also be subject."

Herophilus (or Hegetor?) on Dislocation of the Hip-joint and the Ligamentum Teres (Marx, p. 53).—"Why is there not another method tried for the head of the femur besides those which, up till now, have failed; one in which, when it had been dislocated, it would, when reduced, afterwards remain firm? For we generally follow the analogy of the dislocations in the jaw-bone and the shoulder joint, which, when reduced, remain in position: as also in the case of the elbow, knee, and fingers, indeed of almost all the joints which are liable to become dislocated. The Surgeons, too, have no reason to give why, with this particular joint, the setting will not hold. They might have known it, however, from the Anatomy, for it happens that in the head of the femur there is a ligament which is inserted in the middle of the hollow of the joint. As long as this ligament remains entire, the thigh-bone cannot fall out of joint. If, however, this is torn asunder, it cannot unite, and without such a union, then the joint cannot be retained in its former position As the reason for this is thus clear, one should, in this case, refrain from trying to set the dislocated thigh, and not tire oneself out with fruitless attempts."

This fragment, quoted by Apollonius, is interesting not merely on account of its reference to the ligamentum teres, but also because, as already stated, it has been adduced as proof that the work *On Causes* was written by Herophilus, who is supposed to be referred to in an introductory paragraph, under the name of the "LEADER" of the Herophilites, and stated to be the author of this work. The Greek word Ἡγήτωρ means "leader;" but there seems to be no indication anywhere else of Herophilus being spoken of under this special name, while there is one of the Herophilites actually named Ἡγήτωρ and referred to by Galen (Kühn, Tom. VIII, p. 955). Dr. Greenhill considers, therefore, that this word should be regarded as a proper name, and not translated as "leader;" it is actually printed in the passages quoted by Marx in capital letters (for what that is worth). M. Littré (*Œuvres d'Hippocrate*, Tome I, p. 94) also takes this view. As Dr. Greenhill says in his article (*British and Foreign Medical Review*, Vol. XV, 1843) that he had been unable to obtain a copy of Cocchi's *Dell' Anatomia Discorso*, Firenze, 1745, to compare with a passage presumed to be the same quoted by Dietz (*Scholia in Hippocr. et Galen.*, 1834), I took the trouble to compare them in the Hunterian Library of the Glasgow University, and I found it was the same. In addition to the passage quoted in Greek by Dr. Marx, in the German edition of his work on Herophilus, there is the following sentence given by Cocchi, both in Greek and Latin; the latter rendering is here given with the Greek word translated as "dux" introduced in brackets:—

> "In hisce non solum dux (ὁ ΗΓΗΤΩΡ) aberravit sed & eos qui medicinæ dant operam diversos egit, & Hippocratis dicta nequaquam est assecutus, & simul a rebus minime cum proposito congruentibus argumentationem ineptiorem constituit."

TORCULAR—CALAMUS SCRIPTORIUS—DUODENUM—LACTEALS.

Nothing has served to preserve the memory of Herophilus so much as the name by which the conflux of the sinuses at the occipital protuberance is still known—the *Torcular Herophili.* The Greek ληνός, transmitted to us by Galen from Herophilus, has been translated into Latin as "torcular" (see Kühn's edition, Tom. III, p. 708; Tom. II, p. 712; see also Daremberg's translation, Tome I, p. 581). It has been regarded as doubtful, from Galen's accounts of it, what the ληνός really was; at least Vesalius* was not clear about it, and Marx and Greenhill † confess their inability to solve the problem. The following paragraph from Hyrtl's *Onomatologia Anatomica* (Wien, 1880, p. 552) is an important contribution to the discussion of the meaning of the "Torcular Herophili":

> "A very ancient and, in spite of its vague signification, a carefully preserved word in anatomy, in all ages, is the *Torcular Herophili*—(die Aderpresse) the vein-press. The two places in Galen, which have to do with the *Torcular*, are distinct enough, so that it cannot be doubted which sinus of the dura mater was indicated by this striking name. As all translators and interpreters of Galen have not been clear upon this point, we shall reproduce these passages. They run ‡—'*You will endeavour to insert the scalpel as far as the vertex, where two veins meet one another, the region which Herophilus named Torcular* (ληνός):' and §—'*The meninges, however, meeting in*

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* Vesalius, *De corporis humani Fabrica*, Lib. III. Cap. xiv "according to Galen it is left ambiguous whether the Greeks at first so named the meeting of the first and second sinuses of the dura mater from which the third and fourth proceed: or whether, indeed, they meant the end of the fourth sinus of the dura mater opposite the testes cerebri and stretching into the ventricles."

† *British and Foreign Medical Review*, vol. xv, 1843, p. 111.

‡ "Scalpellum adigere conaberis adusque verticem, ubi venae duae invicem congrediuntur, quam regionem Herophilus torcular (ληνός) nominavit.—(*Administrationes anat.*, Lib. IX, Cap. i, ad finem).

§ "Coeuntes autem in vertice capitis meningis duplicaturae in locum quemdam vacuum (εἰς χώραν τίνα κενήν), quasi cisternam (οἷον δεξαμενήν), quem Herophilus, ob id ipsum, torcular (ληνός) solet nominare, inde velut

the vertex of the head, where they are about to double (our Processus durae matris), *at a certain empty place* (εἰς χώραν τίνα κενήν), *like a cistern* (οἷον δεξαμενὴν), *which Herophilus, on that very account, is wont to call the Torcular* (ληνός), *thence, just as from a summit, send streams to all the parts lying under.*' These words can only be understood as meaning that the *Torcular* corresponds to the confluence of the *sinus falciformis* (longitudinal sinus) with the two *transversi* (lateral) and the *sinus perpendicularis* (straight sinus) in the middle of the posterior border of the *tentorium cerebelli.* This confluence of several sinuses is also named *sinus confluens*, or more properly, *Confluens sinuum.* It is to the *sinus perpendicularis* (straight sinus) alone, as it was understood by Winslow, Haller, and Mayer,* that these words are not altogether applicable—still less to the *Vena magna Galeni* as it is interpreted by Rosenmüller.† Even the single stumbling-block '*in vertice*' disappears, however, if one considers that Galen investigated the brains of animals only, and that in them this place of union of the blood-channels appears pushed much more towards the vertex-region of the head than is the case in man; for the cerebellum of animals lies not under but behind the cerebrum, and is on this account called by Galen, *Parencephalis.* In man it would have required to be called *Hypencephalis.*

"Herophilus, 300 years before Christ, was already affected with the fatal mania of anatomists for decorating the organs of the human body with figurative names. The ληνός is to be classed with his *calamus scriptorius*, his *dodecadactylon*, his *prostata.* To express a hollow space in the dura mater, the Greek had at his command plenty of other words. But no; a ληνός, and nothing else, must be chosen: and that word means a tub, a trough, a coop, a coffin, a wine-press, a kneading-trough, a cattle watering-place, and also, according to Hesychius, a hollow carriage seat, while it could have been applied by Herophilus only in the sense of a reservoir. Herophilus could not have been thinking of the pressing of grapes in the wine-press, for the blood is not, in the ληνός, pressed out, but is merely collected there as in a reservoir (*locus vacuus*), in order to be supplied (according to Galen's doctrine) from that source to the *pia mater* and thence to the brain. To translate ληνός by 'vein-press,' instead of by 'reservoir,' is, therefore, quite absurd. *Obstupui, steteruntque comae*, when I came across a 'vein-screw,' in Heuermann, because a wine-press is worked with screws! and that is also implied in the Latin *Torcular*,‡ from *torqueo*, to turn.

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ab arce quadam, omnibus subjectis partibus rivos mittunt."—(*De usu partium*, Lib. ix, Cap. 6).

* *Beschreibung der Blutgefässe*, p. 204.

† *Compendium anat.*, p. 198.

‡ "*Torcular* (also *torculum*) means according to Varro and Pliny, the wine- and oil-press. By means of a considerable pressure, obtained by screwing down, it squeezed out all the juice which remained in the skins and stalks of the grapes (*pes vinaceorum*) and in the pulp of the olives

"The Greek ληνός was distorted by R. Columbus into the French *Linon*. The ληχηνειον, quoted in Pierer from Galen, is known neither in Galen nor in any other Greek anatomist. Pierer's anatomical colleagues were not, on the whole, Grecian philologists. They omit all the accents, even those which represent letters of the alphabet. Probably their ληχηνειον is altogether wrongly written and thus unintelligible. I can connect (it) only with λέχος, as place of rest and —— nest.

"The *Torcular* was, according to the views of the ancient physicians, a much more important sinus than all the others, and on that account the others received no special names. The *torcular*, as a sinus situated in the middle line, and without a fellow, had to receive the blood which was brought into the skull by both *venae jugulares internae*, and sent through the two *sinus transversi* into the torcular as a central depôt, from which, through the remaining sinuses, and the veins proceeding from them, it was delivered to the brain and its membranes. That is the purport of Galen's doctrine. What we call *sinus durae matris*, Galen knew only as *Rivi* or *Ductus sanguinis* (ὀχετοί and ἀγωγοί). Only once did I find them quoted as (ἐκροαί) effluvia. The Latin barbarians translated these words by *Plateae* (streets) and by the altogether barbarian *Palmentum*, with which *Pavimentum* (as paved street) is incorporated."

The *Calamus scriptorius* was described by Herophilus, and received this name from him under circumstances which are somewhat interesting. At my last lecture I had occasion to speak of the method pursued in writing on papyrus, and I told you this was done by means of a reed or "calamus," shaped not unlike our own pens, a very different instrument, therefore, from the Roman *stilus;* Galen tells us that in naming the part thus, Herophilus was using a comparison with an instrument which he would be seeing in daily use in Alexandria (Kühn's edition, Tom. II, p. 731).*

The *Duodenum* was also described by Herophilus, and named by him δωδεκαδάκτυλος. Galen says "that part of the intestine which Herophilus calls δωδεκαδάκτυλος ἔκφυσις, for so he names the first part of the intestine before it is rolled into folds." (Kühn's edition, Tom. II, p. 780.) It was so called from its being 12 finger-breadths long in those animals in which it was first described. The German *Zwölffingerdarm*

(*sampsa*), after these had had their fluid contents removed by the preceding operation of treading. Details as to the construction of the *torcularia*, with illustrations, may be found in Anthony Rich, *Römische Alterthümer*, 636-640."

* " . . . et potissimum in Alexandria sic calamos quibus scribimus scalptant, ubi Herophilum egisse, quum dissecaret, hinc nimirium est colligere, quod imaginis similitudine adductus sic appellaverit."

and our Latin term *duodenum* indicate the same idea, but the latter is regarded as rather a barbarous word.

The *Prostate* gland was first so named by Herophilus, as Galen tells us (Kühn's edition, Tom. IV, p. 190 [*]; Daremberg's translation, Tome II, p. 118).

The recognition of the *Lacteals* is regarded as one of his discoveries, although Erasistratus seems to have been more elaborate in his observation of them (*Galen*, Kühn's edition, Tom. III, p. 335 [†]; Daremberg's translation, Tome I, pp. 332, 333 [‡]).

HEROPHILUS AND PHARMACY.[§]

Scribonius Largus, in the opening sentence of the epistle, at the beginning of his work, states that Herophilus says medicines were to be regarded as a "divine gift." [||] According to Pliny, he went to extreme lengths in vaunting their powers.

> "Herophilus, the renowned physician, was of this mind, and gave it out in his ordinary speech. That some hearbs there were which were effectuall and did much good if a man or woman chanced but to tread upon them under their feet." He further quotes "a notable and famous apothegme or speech of Herophylus, who was wont to say that Ellebore was like unto a valiant and hardy captaine: for when (quoth he) it hath stirred all the humors within the body, itself issueth forth first and maketh way before them." [¶] In another passage Pliny says, "As for Herophylus, although he was the first that went more exquisitely to work and brought in a more subtile and fine method of Physick, yet none esteemed better of simples than hee." He adds, "In the end al their Physicke proved nothing but words and bibble babbles: for beleeve me, his schollers and disciples thought it more for their ease and pleasure to sit close in the schooles and heare their doctours out of the chair discourse of the points of

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[*] " . . . ac primus quidem Herophilus prostatas glandulosos appellavit." (ἀδενοειδεῖς προστάτας.)

[†] " . . . ut enim et Herophilus dicebat, in glandulosa quaedam corpora desinunt hae venae, quae caeterae omnes sursum ad portas referentur."

[‡] "Car ainsi que le disait Hérophile, ces veines aboutissent à des corps glanduleux (*glandes lymphatiques du mésentère*), tandis que toutes les autres remontent aux *portes* du foie."

[§] Berendes (*Die Pharmacie bei der alten Culturvölkern*, Halle, 1891, p. 248) gives but a meagre reference to Herophilus.

[||] "Inter maximos quondam habitus Medicos Herophilus, Cai Juli Calliste, fertur dixisse, medicamenta divinum munus esse." Scribonius Largus, *Compositiones Medicae*, edition by Rhodius; Patavi, 1655, p. 1.

[¶] Pliny, *Natural History*, Holland's translation, Book XXV, chap. v, p. 219.

Physicke, than to go a simpling into the desarts and forrests to seeke and gather herbs at all seasons of the yere."* Celsus, in the beginning of his fifth book, *De Re Medica,* referring to medicines, says, "Their efficacy was still more extolled by Herophilus and his followers: insomuch that they attempted to cure no distemper without them." †

In the writings of Galen, we have a prescription of Herophilus, preserved in full, under the name of Ἡρυφίλου χλωρόν. (Kühn's edition, Tom. XII, p. 843.)

Ἐρασίστρατος; ERASISTRATUS—BIBLIOGRAPHICAL REFERENCES.

Our bibliographical difficulties cleared away for us by the memoir of Marx, in the case of Herophilus, would no doubt have been very much simplified, as regards Erasistratus, if the following dissertation had not stopped short at its first part: Joannes Fridericus Hieronymus, *Dissertatio Inauguralis Historico-Medica exhibens Erasistrati Erasistrateorumque Historiam,* Jena, 1790. In this dissertation the author gives a long list of references to various writers who deal more or less with Erasistratus. Many of these references when looked up are found, of course, to be very meagre; but the list is an important source of information, and as the dissertation seems to exist in very few of our medical libraries, I have thought it well to append it in a note.‡ In the case of such a multitude of references, one is apt to be bewildered; it may, therefore, be useful to name the works which have seemed to me most helpful:—Greenhill, *Smith's Dictionary of Biography*, Art. "Erasistratus;" Eloy, *Dictionnaire Historique de la Médecine*, 4 vols., 1778; Dechambre, *Dictionnaire Encyclopédique des Sciences Médicales;* J. H. Schulzius, *Historia Medicinae*, Lipsiae, 1728; Haller, *Bibliotheca Med. Pract.*, Basil. 1776; the works of Le Clerc, Sprengel, and Haeser, on the History of Medicine, are also most useful.

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* Pliny, *Natural History,* Holland's translation, Book XXVI, chap. ii, p. 242.

† Grieve's translation, new edition, Edinburgh, 1814, p. 186.

‡ The following are the references regarding Erasistratus, given by Hieronymus in his Inaugural Dissertation :—

Otto Brunnfelsius, *Catalogus Illustrium medicorum sive de primis medicinae scriptoribus,* Argent., 1530, p. 13. Wolphgang. Justus, *Chronologia sive temporum supputatio omnium illustrium medicorum,* Francof., 1556, p. 37 seq. Paschal. Gallus, *Bibliotheca medica,* Basil. 1590, p. 90. Petr. Castellanus, *Vitae Illustrium medicorum, qui toto orbe ad haec usque tempora floruerunt,* Antverp. 1618, p. 70, et 71. Jo. Neander, *Antiquissimae et nobilissimae medicinae natalitia, sectae earumque placita,* Brem., 1623, p. 57 seq. Christ. Jo. Lange, *Histor. Med.,* p. 10; Opp. P. I, Lips., 1704. Hermann. Conringius, *Introductio in universam artem medicam,* Hal., 1726, p. 46, 89, 153. Dan. Clericus, *Histoire de la Médecine,* à Gen., 1696, p. 627; Erasistratum ὡς ἐν παρόδῳ nominat, magis in ed, 1702; P. II, p. 7, seq. et copiose in ed. Amst. MDCCXXIII, II P., Liv. I, chap. i-viii, p. 289-339. Phil. Jac. Hartmannus, *Origines anat.,* p. 68, recus. in *Fascicul. Dissert. ad Hist. medic. spectant.* edit Kurella, Berol., 1754. Jo. Conr. Barchusen, *Historia Medicinae,* Amstel., 1710, p. 50 et 51, 227, seq. Jo. Gottl. Astius, *Diatribe historico-litteraria,* Lips., 1715, p. 11. A. O.

Goelicke, *Historia Anatomiae nova aeque ac antiqua*, Halae, 1713, p. 22 et 24, seq.; *Historia Medicinae universalis*, Francofurti cis Viadrum MDCCXXI, p. 875-946; et *Introductio in historiam litterariam Anatomes*, Francof., 1738, p. 56, seq. Dan. Vinckius, *Amoenitat. philologico-medicae*, Traject. ad Rhen., 1730, p. 314, seq. Jo. Henr. Schulze, *Diss. Academ. sistens historiae anatomicae specimen secundum*, Altorf., 1723, p. 18, seq.; *Historia medicinae*, Lipsiae, MDCCXXVIII, p. 386, seq.; et *Compendium Historiae medicinae*, Hal., 1741, p. 216, seq. G. Stolle, *Anleitung zur Historie der Medicinischen Gelahrheit: in dreyen Theilen*, Jena, 1731, p. 21-24, 397, 503, 524, 681, 760. Polycarp. Frid. Schacherus, *Diss. hist. crit. de honoribus medicorum apud veteres*, Lips., 1732, p. 30. Christ. Guil. Kestnerus, *Medicinisches Gelehrten-Lexicon*, Jena, 1740, p. 275; et *Kurzer Begriff der Historie der medicin. Gelahrheit*, Halle, 1743, p. 118. James, *Discorso istorico del Sig. Dottore James sopra la Medicina tradotto dalla Lingua Inglese*, in Venez, 1752, p. 149, seq. Ge. Mathias, *Conspectus Historae Medicorum chronologicus*, Gotting., 1761, p. 7. Hermannus Boerhaave, *Methodus studii Medici emaculata et access. locuplet. ab A. ab Haller*, Amstel., 1751, pp. 313, 329, 495, 577, 677, 818. Albertus Hallerus, *Bibliotheca Botanica*, Tom. I, Tiguri, 1771, p. 52; *Bibliotheca Anatomica*, Tom. I, Tiguri, 1774, p. 56, seq.; *Bibliotheca Chirurgica*, Tom. I, Bernae, 1774, p. 17, seq.; *Bibliotheca Practica*, Tom. I, Bernae, 1776, p. 117, seq. Godofred. Bened. Schmiedlein, *Primae Lineae Historiae Medicinae universalis*, Lips., 1777, Sect. II, p. 30. N. F. I. Eloy, *Dictionnaire historique de la Médecine ancienne et moderne*, Tom. II, à Mons, 1778, p. 145. Hen. Frid. Delius, *Synopsis Introductionis in Medicinam universam ejusque Historiam litterariam*, Erlang., 1779, p. 15. Jo. Frid. Blumenbachius, *Introductio in Historiam Medicinae litterariam*, Gotting., 1786, p. 42. Lassus, *Historisch-kritische Abhandlung der von den alten sowohl als neuern in der Anatomie gemachten Entdeckungen*, I. Theil, Bonn, 1787, p. 7, seq. Guil. Blackius, *Entwurf einer Geschichte der Arzneywissenschaft und Wundarzneykunst*, Lemgo, 1789, p. 71, seq.

In addition to the above, Hieronymus refers very specially to Jo. Baptista Vulpinus, *Haemophobiae triumphum sive Erasistratum vindicatum, ubi veterum phlebotomiae ad trutinam revocantur*, Lugd., 1697; Mauritius Hoffmann, *Disput. de sanguinis missionis, sive venae sectionis necessitate contra Erasistratum atque Helmontium ejus osores* (*vide* Stolle, *Anleitung*, quoted above).

I may add other two, although I have not seen them either:—Luc. A. Porzio or Portius, *Erasistratus, sive de sanguinis missione:* this is also contained in his *Opera*, Neapoli, 1736. Fried. H. Schwarz, *Herophilus und Erasistratus: eine historische Parallele*, Markbreit, 1826.

BIRTHPLACE—PARENTAGE—TEACHERS—DATE.

Erasistratus was born in Iulis, in Ceas (Κέως), an island in the Aegean.* On account of the resemblance of the names, errors have arisen as between it and the islands of Cos and Chios. Thus, in Stobaeus and Galen † we find "Erasistratus Chius." By the Emperor Julian he is styled the "Samian physician," ‡ in connection with the story of the cure of Antiochus, to be narrated shortly; but this designation seems to arise from his burial place being at Mycale, opposite Samos.

According to Pliny, § he was the nephew of Aristotle—his sister's son; but this is not confirmed by any other writer, and, indeed, there is a clear statement by others that he was the son of Cretoxena and Cleombrotus. ||

Three special teachers are named for him. First, Chrysippus of Cnidus.¶ Cnidus was a rival school to that of Cos, and we can understand that the rivalry of these schools may have affected the relationships of Erasistratus and Herophilus, as the latter was a disciple of Praxagoras of Cos, and this may also account for the antagonism of their respective followers. As Hippocrates belonged to a rival school, Erasistratus no doubt felt himself freer to differ from the Hippocratic teaching than many others. The second teacher named is Metrodorus,** who was the third husband of Pythias, the daughter of Aristotle; in this way the name of Erasistratus is brought into relationship with that of Aristotle. The third is

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* Strabo, *Geographica*, Paris, 1853, p. 417, "Ceas": "Iulis patria fuit Simonidis poetae lyrici et Bacchylidis qui fuit ejus consobrinus: postea Erasistratus medicus et de Peripateticis philosophis Aristo, Bionis Borysthenitae imitator, ibi nati sunt."

† 'Ερασίστρατος ὁ χῖος, Gesner's edition, Basil., 1549; Sermo VII, p. 90; *Galen*, Kühn's edition, Tom. XIV, p. 683.

‡ Julian, *Misopogon: Opera:* Parisiis, 1630, pp. 72, 73: "Magna ibi quaestio medico Samio proposita."

§ Pliny, *Natural History*, "Aristotle's sister's son," Book XXIX, chap. iv; Holland's translation, vol. ii, p. 344, London, 1634.

|| Suidas, *Lexicon*, edition by Bernhardy, Halis, 1852 (under his name): "Erasistratus, Iulietes ex Iuliade Cei insulae urbe assertus igitur ut Ceus, filius Cretoxenae, Medii medici sororis et Cleombroti."

¶ Diogenes Laertius: *De vitis dogmatis et apothegmatis clarorum philosophorum libri decem.* Huebarer's edition, Lipsiae, 1828, vol. ii, p. 222; CHRYSIPPUS: "Fuit autem et alius Chrysippus Cnidius medicus, a quo Erasistratus testatur multa didicisse."

** Sextus Empiricus, *Opera*, edition by Fabricius, Lipsiae, 1841: *Adversus Grammaticos*, Lib. I, cap. xii, p. 258: "Pythias autem, filia Aristotelis, nupsit tribus viris . . . tertio autem Metrodoro medico Chrysippi Cnidii discipulo, praeceptori Erasistrati."

Theophrastus,‡ who is referred to as a possible or probable teacher of Erasistratus.

There can be little doubt that Erasistratus, as well as Herophilus, flourished in Alexandria in the time of Ptolemy Soter; but the following story of the cure of Antiochus, when in love with Stratonice, seems to fix some date *prior* to 280 B.C. (when Seleucus died) as a time in his life when he had already become famous as a physician.

ERASISTRATUS AND THE DIAGNOSIS OF LOVE.

When discussing Galen's works on a previous occasion, I brought under your notice his recognition of the illness of the wife of Justus as being due to love (Kühn's edition, Tom. XIV, p. 630); Galen, in that passage, refers to a somewhat similar diagnosis made by Erasistratus, which is evidently the celebrated one narrated by various authors. I give the account as contained in Plutarch's Life of Demetrius (Langhorne's translation):—

"He [Demetrius] was informed too that his daughter, who had been married to Seleucus, was now wife to Antiochus, the son of that prince, and declared queen of the barbarous nations in Upper Asia. Antiochus was violently enamoured of the young Stratonice, though she had a son by his father. His condition was extremely unhappy. He made the greatest efforts to conquer his passion, but they were of no avail. At last, considering that his desires were of the most extravagant kind, that there was no prospect of satisfaction for them, and that the succours of reason entirely failed, he resolved, in his despair, to rid himself of life, and bring it gradually to a period, by neglecting all care of his person and abstaining from food; for this purpose he made sickness his pretence. His physician, Erasistratus, easily discovered that his distemper was love; but it was difficult to conjecture who was the object. In order to find it out, he spent whole days in his chamber; and whenever any beautiful person of either sex entered it, he observed with great attention, not only his looks, but every part and motion of the body which corresponds most with the passions of the soul. When others entered he was entirely unaffected, but when Stratonice came in, as she often did, either alone or with Seleucus, he shewed all the symptoms described by Sappho, the faltering voice, the burning blush, the tumultuous pulse, and at length, the passion overcoming his spirits, a *deliquium* and mortal paleness.

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‡ Diogenes Laertius, *op. cit.*, vol. i, p. 353. Theophrastus: "Sunt qui dicant Erasistratum medicum hujus fuisse auditorem et veri simile est." See also *Theophrasti Eresii*, *Graece et Latine*, *Opera Omnia*, edition by Heinsius, Lugd. Bat. 1613, where this life is prefixed.

"Erasistratus concluded from these tokens that the prince was in love with Stratonice, and perceived that he intended to carry the secret with him to the grave. He saw the difficulty of breaking the matter to Seleucus; yet depending upon the affection which the king had for his son, he ventured one day to tell him 'that the young man's disorder was love, but love for which there was no remedy.' The king, quite astonished, said, 'How! love for which there was no remedy!' 'It is certainly so,' answered Erasistratus, 'for he is in love with my wife.' 'What, Erasistratus!' said the king, 'would you, who are my friend, refuse to give up your wife to my son when you see us in danger of losing our only hope?' 'Nay, would you do such a thing,' answered the physician, 'though you are his father, if he was in love with Stratonice?' 'O my friend,' replied Seleucus. 'how happy should I be, if either God or man could remove his affections thither! I would give up my kingdom, so I could but keep Antiochus.' He pronounced these words with so much emotion, and such a profusion of tears, that Erasistratus took him by the hand, and said, 'Then there is no need of Erasistratus. You, sir, who are a father, a husband, and a king, will be the best physician too for your family." Upon this Seleucus summoned the people to meet in full assembly, and told them it was his will and pleasure that Antiochus should intermarry with Stratonice, and that they should be declared King and Queen of the Upper Provinces."

This story is given by so many authorities that we may conclude that it is essentially true, particularly as the marriage of Antiochus and Stratonice is authenticated in other ways. Curiously enough, however, some very similar stories are reported regarding other physicians.

For the cure of the young prince Erasistratus is reported by Pliny to have received a fee of 100 talents (*Hist. Nat.*, Lib. XXIX, cap. i), which is calculated as amounting to nearly £25,000 sterling. Another passage in Pliny (Lib. VII, cap. xxxvii) records a fee to Cleombrotus of the same amount, but it is supposed that this is simply an error, and that Erasistratus is the name really intended.

FAME OF ERASISTRATUS.

The fame of Erasistratus not only in Alexandria, but throughout the civilised world, seems to have been very great. The fame of Herophilus was perhaps chiefly based on anatomical studies, but Erasistratus, although apparently going beyond his contemporary in this direction, particularly in his later years, had an overwhelming reputation as a physician and a practitioner, as being one who did not hesitate to upturn old deeply-rooted ideas, even when these had the sanction of Hippocrates himself. We can easily gather from the numerous references to him in the writings of Galen, from the books written by Galen against the views of Erasistratus on the subject of bleeding, and from various commentaries on his writings by Galen which we know are lost, that even up to the end of the second century A.D. the name of Erasistratus was the foremost in medicine.* The fierce conflicts of Galen with Erasistratus and the Erasistrateans, and the sarcasm and contempt which he pours on their views, indicate how potent was the influence of the name of Erasistratus. Tertullian also, who died about 40 years after Galen, gives us a glimpse of this. He says (*Apologeticus*, cap. iii):—

> "Are not the Stoics and Academics so called also from the places in which they associated and stationed themselves? and are not physicians named from Erasistratus, and grammarians from Aristarchus, cooks even from Apicius?"

Probably the reference here is to the "Erasistratei," or followers of Erasistratus, with whom Galen had to contend so hotly. The reputation of Erasistratus extended to the time of the Arabian physicians. Lucien Leclerc,† in enumerating the authors cited by Rhazes, says of Erasistratus—

> "We find him cited several times, for example in connection with abscess and paralysis of the liver. He is even mentioned as the author of a book on anatomy. His name is sometimes so badly written that the Latin translation takes it for 'Aristotle:' but as the reading 'Erasistratus' is forced on us in some of the cases, we have adopted it in all."

In Daremberg's edition of *Rufus Ephesius*, amongst the extracts from Rhazes, at the end, we find reference to "Medicina Harsistratis," which the editor renders as Erasistratus.

The latest contribution we have to the medical history of the time immediately preceding that of Galen is in a recently acquired "Medical papyrus in the British Museum," an account of which is given by Mr. F. G. Kenyon in the *Classical Review* for June, 1892. Mr. Kenyon says (p. 238)—"Reference is made to the rival views of Herophilus and Erasistratus, the writer preferring the former: indeed, a considerable portion of this section is occupied with refutations of the Erasistratean school of medical science."

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* We have still two books of Galen's "*De venae sectione adversus Erasistratum*" and "*De venae sectione adversus Erasistrateos Romae degentes.*" Amongst the *lost* works of Galen's were also "*De Erasistrati Anatome*, Libri III;" "Περὶ τῶν Ἐρυσιστράτου θεραπευτικῶν;" "*In primum librum Erasistrati de febribus*, Libri III:" and "*De Erasistrati curandi ratione*, Libri V." (see lost works quoted by Ackermann in the preface to Kühn's edition of Galen, or in the second edition of Fabricius, *Bibliotheca Graeca*, 1746).

† *Histoire de la Médecine Arabe*, Paris, 1876, Tome I, p. 263.

This suggests the serious disadvantage we labour under, inasmuch as it is always unfortunate to depend for information as to a man's views on the representations of his opponents. This is notably the case here; for Galen is, by far, our most important source of information, and, at the same time, the most uncompromising antagonist of Erasistratus.

Under these circumstances, it may be well to begin with a *favourable* reviewer of Erasistratus and his opinions; in the following interesting sketches from Aulus Gellius, of old times and old opinions, we seem to see him as a bold reformer of anatomical and physiological doctrines and an ingenious theorist also.

Erasistratus on the Cause and Prevention of Hunger.

"At Rome I passed whole days with Favorinus: he held me by the charm of his conversation. Wherever he went I followed him, as if enchained by his eloquence. Thus he carried everything before him by his delightful discourse. One day he went to visit some one who was ill, and I entered with him: he conversed in Greek for a long time with the physicians who were there in attendance. 'One need not wonder,' he said, 'if an enforced fast of three days leads to a loss of appetite, although at first the person is tormented by hunger. Erasistratus was very near the truth when he said, that the cause of hunger is in the fibres of the intestine, of the belly, and of the stomach, being empty and gaping. If they are filled with food, or on the other hand contracted by a long fast, then the place for receiving the food being either filled or contracted, the desire for it is extinguished.' He added that Erasistratus said that the Scythians were in the habit of fastening themselves tightly round the belly with bands when they had to endure hunger for a long time, persuaded that, in this way, they could extinguish the desire for food. Favorinus told us also many other things, always with much affability. Subsequently, when by chance I read the work of Erasistratus *De Divisionibus*, Book I (Διαιρέσεων), I found in it the following passage, which I had heard from the mouth of Favorinus:—'I think that a firm contraction of the belly renders a long abstinence easy. Those who expose themselves voluntarily to long fasts suffer hunger at first, and then they cease to do so.' A little farther on we read, 'The Scythians have a custom, when they must abstain a long time from food, to tie the belly with bandages: they think hunger will then torment them less. In fact, when the belly is full, why should one have no appetite? because there is no void. But when it is contracted there is, equally, no void either.' Erasistratus speaks in the same work of a violent and unbearable hunger, which the Greeks call *Boulimos* and *Boupeina;* he says that it is more commonly felt when there is great cold than on fine days. For the rest, he confesses that he does not know the reason. Here is the passage:—'We do not as yet know, and the matter requires further investigation, why in this case, and in the case of others suffering hunger, this affection is more common when it is cold than when the weather is mild.'"—(*Noctes Atticæ*, Lib. XIV, cap. iii.)

ERASISTRATUS ON THE FUNCTIONS OF THE EPIGLOTTIS AND THE PASSAGE FOR FOOD AND DRINK.

Aulus Gellius writes:—

"Plutarch and other learned writers have said that the great physician Erasistratus blamed Plato for having stated that drinks run down into the lung and moisten it, and then, filtering through the pores, escape into the bladder. The author of this erroneous opinion (as Erasistratus regards it) is the poet Alcæus, who said in one of his poems, *Moisten the lungs with wine: the sun begins his journey.*

"According to Erasistratus two separate channels take origin in our fauces. The one serves for the passage of food and drink which go down into the stomach, where they pass into that part of the belly called in Greek ἡ κάτω κοιλία, where they are softened and digested. Then the solid fæces go to the bowel called *colon;* the moist portions pass through the kidneys and go to the bladder. The other channel is called in Greek *tracheia arteria:* by it the air which we breathe descends from the mouth to the lung, and it ascends again, by the same channel, to the mouth and the nostrils. The same channel serves also for the passage of the voice. It might be feared that fluids or foods, instead of going to the stomach, might go astray into this channel by which we breathe in and out, and so block the respiratory passage. But nature has provided against this: there is placed at the two openings what is called the epiglottis, a sort of barrier which shuts and opens by turns. While we eat or drink the *epiglottis* shuts and protects the *trachea,* preventing anything from slipping into this channel for the breath of life. Thanks to this precaution of nature no liquid enters the lung. Such is the statement of Erasistratus against Plato. Plutarch informs us, in his *Convivialia*, that the opinion of Plato originated with Hippocrates, and that it was shared by Philistion of Locri, and by Dioxippus, the follower of Hippocrates, both celebrated physicians of antiquity. They maintained that the function of the *epiglottis* was not to arrest the passage of all liquids into the *trachea*, seeing that liquids are both useful and necessary for the lung, which requires to be nourished and moistened. The *epiglottis*, they say, serves as an arbiter and moderator, being charged with the duty of rejecting or admitting, according to the needs of the organism. No doubt, it does not permit foods to engulf themselves in the *trachea;* it refuses them entrance there, to send them on to the stomach. But it divides the fluids between the stomach and the lung. Moreover, what it selects for the lung it does not allow to pass rapidly, all at once: but opposing its moveable barrier, it only permits them to enter, little by little, almost insensibly. All the rest it turns aside to the channel which leads to the stomach."—(*Noctes Atticæ*, Lib. XVII, cap. xi).

ANATOMICAL WORK.

Erasistratus pursued anatomy with such enthusiasm that in his later years, when he had withdrawn from practice, he resumed anatomical studies, and made many fresh discoveries, correcting the errors of his earlier views.[*] In particular, he described the lacteals[†] more fully than Herophilus had done; and he pursued the anatomy of the human brain. For details as to his discoveries, the works of Haller, Sprengel, and Le Clerc may be consulted.

SAYINGS OF ERASISTRATUS.

The following saying of Erasistratus is preserved by Stobaeus[‡]:—" Fulness and corruption are the principal causes of disease."

Somewhat similar is the statement made by Plutarch[§]: " Erasistratus held that disease arises from undue quantity of food, and from indigestion and putrefaction, and that moderate and sufficient diet leads to health."

In another place, Plutarch[||] quotes Erasistratus as terming medicines " the hands of the gods"; he goes on to condemn the unnatural medicinal compounds made up of minerals, herbs, and products of earth and sea, all mixed up into one mass.

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[*] *Galen*, Kühn's edition, Tom. V, p. 602: " At quum senex esset jam et vacaret solis artis speculationibus, exactiores moliebatur dissectiones."

[†] *Galen*, Kühn's edition, Tom. II, p. 649; Tom. IV, p. 718.

[‡] *Stobaeus*, Gesner's edition, Sermo XCVIII, "*De Morbis*," p. 540: πλῆθος καὶ διαφθορὰ τάνωτάτα ἀίτια.

[§] Plutarch, *De Placitis Philosophorum*, Lib. V.

[||] Plutarch, *Quæst. Convivialium*, Lib. IV, quæst. i.

Like Galen, we find Erasistratus impressed with the adaptations of means to ends in nature. In a passage of Plutarch's *De Amore prolis* (iii) this is argued, with the addition: * "And, as Erasistratus says, Nature does nothing that is useless or worthless."

VENESECTION *versus* LIGATURES—PHARMACY.

From the story of Antiochus and Stratonice we can see at once that Erasistratus was a man of the greatest shrewdness. Very probably, in his observation of medical practice, he had early become alive to the evils resulting from the abuse of venesection. It is as an opponent of bleeding that we hear of him so constantly from Galen, who, indeed, wrote a book "against" him in this respect, and another against his followers in Rome; in both of these he gives various quotations from the writings of Erasistratus. Instead of venesection, Erasistratus, and others, practised the use of ligatures to the limbs. This controversy comes up again and again in the writings of Galen. Referring to some opponents whom he flattered himself he had routed in argument, Galen adds, "However, they at last ended by taking refuge in Erasistratus, stating that it was shown by him in his first book on *Loss of Blood*, that it was better to apply ligatures than to bleed." †

The opposition of Erasistratus to venesection does not seem to have been so extreme as generally alleged, if we may trust a statement of Caelius Aurelianus, from which it appears that Erasistratus *did* advise the bleeding of patients. ‡

As already indicated, in one of his sayings, Erasistratus took what we would regard, now-a-days, as sensible views regarding the prevention of disorders by care in diet; and he equally approached modern views in condemning the miscellaneous compounds which culminated in the awful medicinal mixtures described by Galen under the name of "Theriaca." Probably, from seeing the abuse of opium, Pliny § tells us that he and Diagoras "condemned it altogether as a most deadly thing, and would not allow that it should be so much as injected or infused into the body by way of clyster, for they held it no better than poison and otherwise hurtful to the eies."

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* " . . . ut ait Erasistratus nihil habeat otiosum aut frivolum." Compare *Galen*, Kühn's edition, Tom. IV, p. 722.

† *Galen*, Kühn's edition, Tom. II, p. 190.

‡ Caelius Aurelianus, *Morb. Chron.*, Lib. II, cap. xiii: "Si quidem [at quidem] Erasistratus phlebotomari praecepit patientes."

§ Pliny, *Natural History*, Book XX, chap. xix, Holland's translation, vol. ii, p. 68.

As regards purgatives and clysters, it was no doubt against the current abuse of them that Erasistratus protested, for Caelius Aurelianus tells us that although writing against them, he himself used them.*

The Pharmacy of Erasistratus is referred to by Berendes in his book "*Die Pharmacie bei der alten Culturvölkern*" (1891), but only in a few lines.

In Celsus we find a prescription spoken of as "Aut Erasistrati compositio aut Cratonis"† and another "Quae ad auctorem Erasistrati refertur."‡ One very similar to the last is quoted by Galen as "Compositio Erasistrati." §

With regard to the views of Erasistratus on Fevers, and other medical questions, the works of Le Clerc and Sprengel must be referred to.

SURGERY—DENTISTRY.

The invention of the catheter, for emptying the bladder, is attributed to him by Galen, who describes it as resembling in shape the "Roman Sigma"—S. ||

If somewhat antagonistic to heroic methods in medical practice, as regards bleeding and energetic purgation and narcotism, when we come to surgery, we cannot complain of his timidity! Caelius Aurelianus tells us that "in patients with hepatic disease, Erasistratus laid bare the liver by incisions through the skin and membranes, and applied remedies to the diseased part." ¶

On the other hand, in dental operations, he alleges (apparently with some humour) that only loose teeth should be extracted, and that this was indicated by lead instruments, incapable of transmitting any great force, being shown in the

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* Caelius Aurelianus, *Morb. acut.*, Lib. III, cap. xvii: "Temere Erasistratus secundo libro de ventre scribens culpans copiam atque acrimoniam clysterum, ab antiquis ordinatam, ipse quoque utitur clystere ex nitro atque sale."

† Celsus, *De re medica*, Lib. VI, cap. xviii.

‡ Celsus, *De re medica*, Lib. VI, cap. vii.

§ *Galen*, Kühn's edition, Tom. XII, p. 735.

|| *Galen*, Kühn's edition, Tom. XIV, p. 751.

¶ Caelius Aurelianus: *Morb. Chron.*, Lib. III, cap. iv: "Erasistratus autem in jecorosis praecidens superpositas jecoris cutes atque membranam utitur medicaminibus, quae ipsum jecur late amplectantur, tum ventrem deducit."

temple of Apollo at Delphos.* When we imagine the agony likely to be inflicted by the dental instruments and operations of his time, we may perhaps be inclined to adopt his views!

DEATH AND PLACE OF BURIAL.

His death is thus recorded by Stobaeus.† "Erasistratus of Chios, when aged, was affected with an intractable ulcer of his foot: *Ah, well!* he said, *I remember my Country,* and drinking off hemlock, he died." According to Suidas,‡ he was buried in Mycale, in the neighbourhood of Samos.

WORKS OF ERASISTRATUS.

The works of Erasistratus have entirely perished, and it is even difficult to make a satisfactory list of them, although there are many references to them in Galen and Caelius Aurelianus: one is referred to by Athenaeus, and some are said to be quoted by Rhazes. It is not always clear whether a work referred to, when quoted, is a special book or only a special section of a more general work. Under these circumstances I give one or two lists, showing the evidence so far as given, but without any special sifting of the references. I have not been able to find any proof adduced for the work on Cookery quoted by Hahn. The three last entries in Haller's list seem rather vague as regards his authorities (probably from errors in printing in the case of the first of the three); the second last is found in Caelius Aurelianus, *Morb. Chron.*, Lib. II, cap. i; the last, *de Summa*, does not seem clear.

Books of Erasistratus, and References to them, cited by Haller (*Bibl. Med. Pract.*, Tom. I, Basil. 1776).

Περὶ της κατὰ ὅλον πραγματείας (Athen., L. XV).
De *re medica*, L. IX (Suidas I).
De *divisionibus* (Galen. *adversus Erasistrateos*).
Librum *adversariorum*, in quo suas adnotationes recensebat.
De *rejectione sanguinis*, quem puto etiam esse *l. de eductione sanguinis* (Galen. *adversus Erasistrateos*, et *de libris suis*, L. IV, c. 6).

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* Caelius Aurelianus, *Morb. Chron.*, Lib. II, cap. iv: "Nam Erasistratus plumbeum inquit odontagogum quod nos dentiducum dicere poterimus, apud Delphum in Apollinis templo ostentationis causa propositum, quo demonstratur, oportere eos dentes auferri qui sint faciles, vel mobilitate laxati, vel quibus sufficiat plumbei ferramenti conamen ad summum."

† *Stobaeus*, Gesner's edition, Sermo VII, "De Fortitudine," p. 91.

‡ Suidas, *Lexicon*, "Erasistratus": "Sepultus est juxta montem Mycalen e regione Sami."

De *ventre* (L. III, Cael. *tard.* L. IV, c. 3; *Acut.* II. c. 31 L. II. *tard.*)
De *febribus* (L. I, Galen. *caus. procatar. Comm. in* L. I, *de vict. acut.* Cael. *tard.*, L. IV, c. 6. *Acut.*, L. III. c. 17, Gal., *adv. Erasistr.*)
De *causis* (Dioscor. *theriac.* praef.)
Contra Medicos Coos (Ita Clericus, non vero satis novi, an proprio libro, an alio, in eos medicos dixerit).
Salutarium preceptorum LL. (L. II, Cael. *tard.* L. II, c. 7 *Acut.*, L. III, c. 21).
De *tuenda valetudine* (L. I, ap. Galen. *plethor.*, c. 6).
De *medicamentis & venenis* (Dioscor. L. V., c. 18).
L. de *singulorum morborum curatione* (Galen. *comm.* III, in L. I, *de vict. acut.*)
L. *Anatomicorum de singulis passionibus* idem forte liber (Cael., *acut.* L. III, c. 4).
De *podagra* (Cael. *tard.*, L. V, c. 2).
De *hydrope* (Cael. *tard.*, L. V, c. 8). Query, Lib. III, cap. 8.
De *vulneribus* (Galen. *advers. Erasistr.*)
De *consuetudine* (Galen. c.)
De *paralysi* (Ib.) See reference, last page.
L. de *summa* citat Rhazeus.

Books of Erasistratus according to Schulzius (Historia Medicinæ, p. 401).

De rejectione sanguinis; De febribus; De affectibus alii; De virium resolutionibus; De podagra; De salutaribus; De divisionibus; De vulneribus.

Books of Erasistratus according to Hahn (Art. "Erasistratus," *Dict. Encyclop. des Sciences Médicales*).

1. Καθ' ὅλου λόγοι (The whole of Medicine).
2. Περὶ πυρετῶν (On Fevers).
3. Περὶ τῶν διαιρέσεων (On Anatomy; and also Special cases of disease).
4. Ὑγιεινά (Health: salutaria precepta).
5. Περὶ τῶν κατὰ τὴν κοιλίαν παθῶν (On Diseases of the Abdomen).
6. Περὶ αἵματος ἀναγωγῆς (On Loss of Blood).
7. Περὶ τῶν παρέσεων (On Paralysis).
8. Περὶ ποδάγρας (Gout).
9. Περὶ δυνάμεων καὶ θανασίμων (On Medicines and Poisons).
10. Ὀψαρτυτικόν (Cookery).
11. *De Hydrope.* (On Dropsy).

CLINICAL MEMORANDA,

BEING SELECTED CASES FROM THE WARDS OF

DR. M'CALL ANDERSON,

Professor of Clinical Medicine in the University of Glasgow.

(REPORTED BY WM. R. JACK, M.B.)

IV.

7. *Case of Anœmia (?) with well marked Dropsy of the Face and Lower Extremities.*

A. G., æt. 21, telephone operator, was admitted to Ward VII on 9th January, 1893, complaining of swelling of the feet and legs of three months' duration.

Both her parents are dead—the father at 56, of "stoppage of the bowels," the mother at 48, of a "tumour of the liver." Of their seven children, six survive. One died at 13, of inflammation of the bowels; the rest are alive, and, except the patient, well.

Her own health has in the past been good. Three years ago an accident to her right knee kept her in the Kilmarnock Infirmary for six weeks. During part of this time both her legs were swollen, but this passed off a fortnight before she left. It returned soon afterwards, and she went to the Glasgow Royal Infirmary for advice. There she was told that both her legs and knee were quite well, and shortly afterwards the swelling disappeared. She remained in good health till the onset of her present illness.

Four months ago, probably as the result of a wetting, her ankles, and soon afterwards her legs, again began to swell. Except for this she felt perfectly well. She had had no previous feverishness, rigor, or any other symptom, except slight pain in the back. The swelling was at first very considerable. Within three weeks of its appearance she noticed that her eyes and face were swelled on rising in the morning. This disappeared as the day advanced, while the legs became more swollen. These symptoms have persisted until now, and are all that she complains of. She has never noticed any change, either in the quantity or the colour of her urine, nor has she had any headache. Her sight is perfect. The appetite is good, and the bowels were always regular until she took to bed, since when they have been somewhat costive. She has no cough, dyspnœa, or palpitation. She menstruates regularly.

On examination she is noticed to be pallid. This, she says, appeared at the beginning of her illness. The second aortic sound is slightly accentuated, but there is no increase of cardiac dulness, nor any murmur. The pulse gives to the finger the characters of slightly increased tension, but this does not appear in the sphygmogram. The other organs are healthy. There is considerable œdema of the feet, legs, and face. The urine is faintly acid, of specific gravity 1021. It contains neither albumen nor sugar. Abundant epithelial cells are present. The quantity varies between 30 and 40 ounces.

On 23rd January, after being under observation for some days, during which albumen was never found, the patient was put upon milk diet, six pints of skimmed milk daily, and potus imperialis. She was kept in bed. On 26th January light food was substituted for the milk diet, and on 1st February the skimmed milk and potus imperialis were replaced by an occasional injection of pilocarpine at night, and Blaud's pills with arsenic in the bipalatinoid form. Under this treatment she improved very rapidly, and left on 10th February. Albumen was never found in the urine, nor were casts ever observed, though frequently looked for. The anæmia had almost disappeared; on 7th February the blood corpuscles numbered 4,140,000 per ccm. When she lay still in bed there was no œdema, but on rising, the ankles became slightly swollen. From 1st February the quantity of urine had risen to 50 ounces.

Remarks by Dr. Anderson.—The symptoms present in this case were very unusual. The well marked dropsy of the lower extremities and face, and the pallor, led to the provisional diagnosis of tubular nephritis, a suspicion which was, however, negatived by the total absence of albumen and casts in the urine, as well as by the futility of treatment directed against that condition. Those who hold that tubular nephritis may exist without albuminuria might point to this as a case in point, but he does not believe in the existence of such a condition. Indeed, there can be no doubt that, prior to the differentiation of myxœdema, most cases of that disease were held to be illustrations of tubular nephritis, without albuminuria. On carefully weighing all the symptoms, he thought that the balance of evidence was in favour of this being an illustration of anæmia, and all the more as rapid improvement took place under the influence of arsenic and iron. At the same time it must be admitted that marked œdema of the face is not a common occurrence in cases of anæmia.

8. *Case of Ephidrosis Cruenta.*

B. S., a girl of 12 years of age, was admitted to Ward IV on 17th January, 1893, her illness being of eighteen months' duration.

The family history is unimportant. Her general health has always been good, but for occasional headaches. No cause can be assigned for the outbreak which, when it first appeared, attacked the lip and brow, and afterwards involved the face, arms, body, and legs in succession. It affects only a limited area at one time, and leaves one part to reappear in another. Varying intervals elapse between successive crops, sometimes one or two days, sometimes as much as a fortnight; but the old patches have never been entirely healed before new ones came out. During the month before admission she had two or three bleedings from the right ear and from the nose, by which she lost a good deal of blood. These attacks lasted about a quarter of an hour. She has never menstruated. The urine and temperature are normal.

Shortly before the appearance of each crop of eruption, the patient feels rather sick. Then a red and circumscribed erythematous patch, of varying diameter, but usually round, comes out, oftenest upon the face or the arms, but not infreqently upon other parts of the body. After an interval of from a few minutes to half an hour the central portion of this patch becomes more intensely red, and forms an oblong or more rounded figure, from half an inch to an inch in length, and a quarter of an inch broad. Over this area the corium appears to undergo rapid solution, and a watery serum exudes, which occasionally is distinctly blood-stained. At or near the margin, either slightly before or simultaneously with the development of the central spot, a ring of deeper colour forms, but does not go on to exudation. This ring is about half a finger's breadth in width. Each patch of eruption remains out from half an hour to an hour and a half, and then gradually fades. The serous or sanguineous exudation dries up, and forms a palish or a dark-brown scab, according as blood was absent or present. In a week or so this scab falls off, leaving behind a pink cicatricial tissue, which is for some time tender to pressure.

Each crop of eruption is usually composed of several patches, which appear at irregular intervals. Sometimes two or more come out together, sometimes they follow each other at intervals of about half an hour, or a longer time may intervene. The whole crop has usually appeared within a few hours. The separate patches appear very rapidly. The eruption is never itchy, and only occasionally painful. Where the exudation is only serous, it bleeds very readily if touched.

On admission, patches of the cicatricial tissue referred to were found on the forehead and legs; and within a few days others appeared on the cheeks and on the dorsum of the right arm and hand, where their long diameter corresponded to the length of the limb.

The treatment consisted in hot hip baths with mustard, and the administration of pil. aloes et ferri. Towards the end of February Carlsbad salts were added. The patient, however, improved but slightly, fresh crops of eruption appearing every few days. Her general health remained excellent.

Note.—Since the date of the above report, the treatment has been changed. The patient was put upon ergot of rye. The attacks of eruption then rapidly diminished in number, and she was taken away by her mother upon 11th April, 1893. At that time she had had but one attack in five weeks, a fortnight before she left. An eruption of eczema appeared upon the back of the head about a week before she left the Infirmary. Otherwise her general health was in every way good.

Remarks by Dr. Anderson.—There can be very little doubt that this is a case of vicarious menstruation, and that no permanent improvement is likely to occur until menstruation is fully established. A very similar case was recorded a good many years ago * in which the symptoms rapidly disappeared when menstruation became more regular, and there is good reason to hope that a similar result will follow in the present case.

TWO CASES OF LEUKÆMIA IN YOUNG CHILDREN.†

By GEO. S. MIDDLETON, M.A., M.D., F.F.P.S.G.,
Physician to the Glasgow Royal Infirmary; Extra Physician to the Royal Hospital for Sick Children.

LEUKÆMIA is such a comparatively rare affection in children that I desire to put on record the two following cases, which are the only ones occurring in infancy that have come under my observation.

While Baginsky states that from 15 to 20 per cent of all cases occur in children under 10 years of age (from one week old and upwards), Jaksch believes that many of the recorded cases have been spurious ones. The facts recorded below appear to me to prove conclusively that these two were genuine cases of leukæmia.

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* *Lectures on Clinical Medicine*, by T. M'Call Anderson, M.D. (Macmillan & Co., London), p. 228.

† Read at a meeting of the Glasgow Medico-Chirurgical Society, 3rd March, 1893.

I. David E., age 16 months, was admitted into the Sick Children's Hospital on 30th July, 1892, suffering from great weakness, loss of flesh, and swelling of the belly. The history bore that he had never been strong since his birth. He had had periodic attacks of feverishness, accompanied by great loss of flesh. During one of these attacks, eight months before admission, the belly became much swollen, and the child became very much blanched. There were never any hæmorrhages. The bowels were very costive, and he vomited whenever food was given to him. After this attack he improved, but the belly never decreased. He seemed to be improving up till a week before admission, when he again became very feverish, and vomited his food; but he had not vomited for three days. He had a slight cough. The belly was said to have become more swollen and hard, and he had rapidly lost flesh and colour.

The father had suffered from dropsy, but both he and the mother were said to be healthy; of their five children, all were healthy save the patient.

The child was profoundly anæmic, the mucous membranes sharing in the pallor. He was greatly emaciated. The skin of the trunk and legs presented numerous purpuric spots.

The abdomen generally was distended and soft, except in the splenic region. The spleen was much enlarged, extending downwards 2½ inches below the hypochondriac margin, and reaching forwards within 1½ inch of the umbilicus. Its upper border could not be fixed with certainty, but it did not appear to extend very high. There was no enlargement of the lymphatic glands.

Neither percussion nor palpation discovered any enlargement of the liver.

The white blood corpuscles were greatly increased in number, their proportion to the red being 1 in 9. The number of the red in a cubic millimetre was 3,330,000. The red corpuscles formed normal rouleaux, and presented little variation in size, while the white corpuscles varied exceedingly, some being smaller even than the red.

The child coughed a good deal, and cried greatly, especially when the temperature was high, as it was every evening. The average of six morning temperatures was 99·8°, and of six evening records 103·4°, the minimum being 98·2° (morning) and the maximum 104·8° (evening). He slept very badly, but on the whole he was very patient.

There was marked dulness over the right side of the chest, especially over the base. The respiratory murmur there was tubular, and accompanied by very articulate, small, crepitant râles.

The heart seemed to be displaced to the left or enlarged. There was no murmur.

The urine contained no albumen.

He had slight diarrhœa, which was readily controlled.

He took from one and a half to two pints of milk daily without sickness.

The child was badly developed for his age. He had six teeth, two lower, and four upper incisors. The ribs had something of the appearance of the rachitic rosary, but the ends of the long bones were not greatly enlarged. The anterior fontanelle was unduly patent.

The child was evidently suffering from an inflammatory complication in the right lung, and was in a very serious condition on admission. The treatment consisted in feeding, slight stimulation, and the administration of quinine in grain doses thrice daily; but he gradually sank, and died on 5th August.

An examination of the body was made nineteen hours after death, when the following note was made:—

"The body is much emaciated, and weighs 13½ lb. The abdomen is distended, and there are *post-mortem* discolourations on the abdominal wall and on the limbs. There is no *post-mortem* rigidity.

"*Heart.*—There are about 2 drachms of fluid in the pericardium. The heart weighs 1¾ oz.; contains in the auricles a small amount of whitish clot, and in the ventricles fluid blood. The muscular tissue is rather pale, but presents no fatty degeneration. The valves are normal.

"*Lungs.*—Left lung is free from adhesions; weighs 2¼ oz., is somewhat congested at the base, and presents a few small, somewhat pale nodules of the size of a split pea (reserved for further examination). The right lung is adherent, but the adhesions break down easily. The pleura is much thickened from exudation, which is specially abundant over the diaphragm. While the left lung is air-filled throughout, the right contains air only at the apex. The right lung weighs 5½ oz. To the eye it presents mainly the characters of grey hepatisation.

"There is no enlargement of the bronchial glands. In neither pleura is there fluid.

"*Spleen* is free from adhesions; it weighs 4½ oz. It is somewhat hard, and its cut surface does not bleed freely. On section it is somewhat mottled, but generally dark.

"*Kidneys.*—Left kidney weighs 1¼ oz. Its capsule is non-adherent. Right kidney weighs 1 oz. It presents the same characters as the left. Neither shows anything abnormal save pallor.

"*Intestines.*—These present a remarkably pallid appearance without any evidence of hæmorrhage. The stomach is dilated, and contains masses of undigested curd.

"*Liver* weighs 11 oz. fully. On section it is somewhat pale and does not bleed freely.

"*Glands.*—There is no enlargement of any of the lymphatic glands—deep or superficial.

"*Head* is not examined.

"The *ribs* present some swelling at their junction with the cartilages. There is no enlargement of the epiphyses of the long bones."

The parts preserved were kindly examined by Dr. R. M. Buchanan, whose report is as follows:—

"*Microscopic examination* of the *spleen* reveals a tissue apparently denser than normal, and even difficult at first sight to recognise as splenic tissue. This is due to the presence of a considerable number of somewhat large mononucleated cells in the sinuses of the pulp, giving the section a more than usually cellular appearance.

"In the *lung* the alveoli contain cells which, to a considerable extent, are leucocytes with divided nuclei, and are otherwise large mononucleated cells. The capillaries are greatly distended, and along with red corpuscles are leucocytes, many of which are of the large mononucleated kind. There is no evidence of shedding of the alveolar epithelium.

"Fat has disappeared from the *bone marrow*, and it is entirely composed of cells of different kinds, many of them with eosinophile granules. Of the latter a considerable proportion have small round nuclei. There are frequent evidences of nuclear division in the form of cells with double nuclei, the two nuclei sometimes having a polar position.

"The heart, kidney, and liver appear structurally normal, but in their capillary vessels a great excess of leucocytes is seen.

"On longitudinal division of the portion of femur submitted, the medullary cavity is seen to be of considerable size, the increase apparently arising at the expense of the compact tissue of the shaft. The cavity is completely filled with a dark-reddish grey semi-solid mass, which contains in its substance numerous minute spicules of bone. The medulla of the rib is considerably paler in colour than that of the femur."

The microscopic examination, as will be seen, does not corroborate the opinion formed, both during life and at the *post-mortem* examination, that there was a pneumonic consolidation of the right lung. The marked oscillations of the temperature were attributed by me to the fact that the pneumonia was taking place in a case of leukæmia, and therefore showed the variation frequently met with in that disease; but the microscopic examination proves that the consolidation was not really of the pneumonic character.

II. Alexander L., 4 years of age, was admitted to the Royal Infirmary on 25th September, 1892, on account of swelling of the abdomen. He had been under medical treatment for some six months, the first two for bronchitis, and the last four on account of his present complaint. He had formerly been a plump, healthy child, the only illness he had had being measles when he was about 3 years of age, from which, however, his parents believed that he had recovered perfectly.

There was no history of bleeding from any source. The appetite was good, and there was no vomiting, but diarrhœa was present. The family history was unimportant, except that they evidently lived in a much overcrowded house.

The blood was examined before admission, when the proportion of white to red corpuscles was found to be 1 to 6. A second enumeration on 4th October discovered the proportion to be 1 to 5, and the number of red per cubic millimetre 3,000,000.

The facts of this case may be best stated by recording a note made on 25th November:—

"*25th November, 1892.*—Dr. M. is struck by the following points in the physiognomic diagnosis:—(1) very marked abdominal intumescence contrasting with great general emaciation, as seen in the thorax and limbs; (2) a slight degree of pallor of the face and mucous membranes, which it may here be stated does not correspond with the deterioration of the blood as previously noted, and as noted to-day; (3) an absence of any of the signs of rickets.

"The abdomen at its greatest circumference measures 26¾ inches at a point about 3 inches above the umbilicus. The enlarged spleen is traced by palpation as follows:—It emerges from below the hypochondrium about half an inch within the left nipple line, passes transversely across the abdomen with a curved outline (the concavity of which is directed upwards) so as to reach 3½ inches to the right of the middle line, the upper border at that point lying 3 inches below the costal margin. At the umbilicus it extends, as far as can be made out, 3 inches to the right.

"The lower margin extends within a finger's breadth of the pubis and of Poupart's ligament, and it almost touches the anterior superior spine of the left ilium. The posterior margin, traced upwards, disappears under the ribs just in front of the twelfth rib. In the left axillary region percussion determines the upper border of the splenic dulness crossing the ninth rib.

"On measurement obliquely from above downwards the greatest diameter is 12½ inches, transversely the greatest measurement is 12 inches. The upper edge presents a well marked notch, and though somewhat rounded in form, is very easily defined. The right margin on the other hand is determined only by deep palpation, assisted by the other hand in the lumbar region lifting up the organ. The lower margin is as readily felt as the upper, is somewhat rounded, and also presents a notch vertically opposite to that described above. The outlines of the organ are otherwise regular, and its surface smooth and free from nodules. On bimanual palpation the tumour is freely movable, and gives a sense of weight and hardness. On percussion it is absolutely dull.

"The percussion note over the remaining portion of the abdomen is generally dull, a small area of tympanitic percussion being obtained in what may be presumed to be the gastric region, and another over the region of the caput cæcum coli. There is no very definite evidence of fluid in the peritoneal cavity, but it is noted that on turning the child on his left side the right flank gives a franker tympanitic note than it does in the recumbent position.

"The upper border of the hepatic dulness in the right axillary line lies on the sixth rib. Its lower border cannot be made out either by percussion or palpation.

"The cardiac dulness is met with at the upper border of the third rib. Its right margin is at the left border of the sternum, while the left border reaches nearly an inch to the left of the nipple line. The apex impulse lies in the fifth intercostal space, slightly outside the nipple line. There is a brief and somewhat uncertain V. S. murmur heard best at the apex, but also audible all over the præcordial area, and at times replaced by what appears to be a reduplication of the first sound. The second sound over the pulmonary artery is accentuated. Over the subclavian on both sides a V. S. murmur is audible, much more loudly than over the præcordial area, especially on the right side. There is no venous hum, but over the jugular vein on the right side there is a marked thrill. Both veins and arteries in the neck pulsate unduly. Examination of lungs detects nothing abnormal, except perhaps slight impairment of the R. M. at the left base. The temperature chart shows very great oscillation, the highest record being 102·4°, and the lowest 96·8°. Generally speaking, it has been febrile at night and abnormally low in the morning; *e.g.*, two weeks, a month apart, give morning averages, 97·4° and 97·9°, evening averages, 99·7°, 100·4°. There has been considerable diarrhœa, especially about the beginning of this month. In the course of examination, the child has been perfectly tranquil, has evinced no indication of tenderness in the abdomen, and in particular there is no evidence of tenderness in the long bones. The blood presents a great increase in the number of white corpuscles. These vary much in size, and many of them are highly granular. The red corpuscles do not form rouleaux in the normal manner, although many of them run together into clumps. Their individual forms cannot be determined. There is a considerable number of blood plates."

The blood was examined microscopically by Dr. Coats and Dr. R. M. Buchanan. There is a very great increase in the leucocytes, not limited to one form. The multinuclear cells are very numerous, but the large mononuclear cells are most increased, forming the most striking and obtrusive constituent. They are also, many of them, unduly large, and some have two nuclei, as if in process of division. The small mononuclear cells are but little increased in number. The eosinophile cells are not apparently increased at all.

"*13th December, 1892.*—The condition of this patient has gradually been getting worse. The diarrhœa has increased to such an extent as almost to amount to incontinence, and is accompanied with tenesmus and prolapse of anus. During the last week some œdema of the feet and ankles has been noticed. This is extending up the legs, and is increasing in amount. There is also some œdema of the face to be noted, especially about the eyelids. Otherwise his condition is pretty much as above noted. His father takes him home to-day."

During his residence various observations were made of the urine, which was generally rather scanty, and of high specific gravity. It never contained albumen. On four occasions Dr. P. C. MacRobert estimated the urea passed in twenty-four hours, and the amounts in grains were 210, 197, 197, and 158 —amounts which probably represent a considerable increase in the excretion of urea; though unfortunately there is no record of the boy's weight, he certainly must have weighed much less than the normal for a child of his years, namely, some 40 lb. It is probable also that all the urine was not always obtained.

The treatment consisted in the administration of liquor arsenicalis, which was begun in 2 minim doses and increased to 5 minims, when it had to be discontinued owing to gastric disturbance. It was frequently renewed, but it could never be tolerated in any considerable quantity. Trial was also made of inunction of the biniodide of mercury, and ultimately the syrup of the iodide of iron was administered, but nothing did any good.

[A letter from his father, of date 4th March, states that he had somewhat improved in colour, that he no longer had any tendency to prolapsus ani, and that œdema had entirely disappeared. He was then suffering from a bad cough, and he frequently had "gum boils and sore ears."]

ANALYSIS OF CASES TREATED IN THE GLASGOW ROYAL INFIRMARY (WARDS Nos. 1 AND 2) DURING THE YEAR 1892.

By JOHN DOUGALL, M.D., F.F.P.S.G.,

Professor of Materia Medica, St. Mungo's College, Glasgow; Physician and Lecturer on Clinical Medicine, Glasgow Royal Infirmary.

Disease.	Males.	Deaths.	Death-rate per cent.	Females.	Deaths.	Death-rate per cent.
Abdominal tumour,	...	...	...	2	...	...
Acne rosaceæ,	1	...	...	...	...	...
Acute pharyngitis,	...	...	...	1	...	...
Alcoholism,	...	...	...	1	...	...
Anæmia,	1	...	...	6	1	16·6
Aortic aneurysm,	1	...	...	...	...	...
Aphasia,	1	...	...	...	...	...
Apoplexy,	..	...	...	2	2	100·0
Arterio-capillary fibrosis,	1	...	...	...	...	...
Asthma, spasmodic,	...	...	...	1	...	...
Biliary calculi,	...	...	...	2	2	100·0
Bright's disease,	8	4	50·0	4	...	...
Bronchitis,	16	1	6·2	16	...	...
Cardiac arythmia,	...	...	...	1	...	...
Caries, spinal,	...	...	...	1	...	...
Chlorosis,	...	...	...	1	...	...
Chorea,	...	...	...	4	...	...

DISEASE.	Males.	Deaths.	Death-rate per cent.	Females.	Deaths.	Death-rate per cent.
Cirrhosis of liver,	3	1	33·3	...	...	...
Cystitis,	...	...	...	1	...	...
Diabetes mellitus,	1	...	...	2	...	...
Diarrhœa, chronic,	1	...	...	1	...	...
Debility,	...	...	...	3	...	...
Delirium tremens,	1	...	...	...	...	...
Dyspepsia,	...	...	...	2	...	...
Eczema,	2	...	...	2	...	...
Empyema,	1	1	100·0	...	...	...
Epilepsy,	4	...	...	3	...	...
Facial neuralgia,	1	...	...	2	...	...
Fever and ague,	1	...	...	...	...	...
Fever, cerebro-spinal,	1	...	...	...	...	...
,, typhoid,	...	...	...	2	*	...
Gangrene of lung,	1	...	...	...	...	...
Gastric ulcer,	...	...	...	2	...	...
Gastritis,	1	...	...	14	...	...
Goitre,	1	...	...	...	...	...
Granular kidney,	...	...	...	1	1	100·0
Hæmatemesis,	2	...	...	...	...	...
Hæmatoma of vulva,	...	...	...	1	...	...
Hæmoptysis,	1	...	...	...	...	...
Hæmorrhoids,	...	...	...	1	...	...
Hemiplegia,	6	1	16·6	7	1	14·2
Hypochondriasis,	1	...	...	...	...	...
Hysteria,	...	...	...	3	...	...
Jaundice,	...	...	...	3	...	...
Land scurvy,	2	...	...	...	...	...
Lardosis,	...	...	...	1	...	...
Locomotor ataxy,	4	...	...	...	...	...
Lumbago,	2	...	...	...	...	...
Mediastinal tumour,	...	...	...	1	...	...
Meningitis, simple,	2	1	50·0	...	...	...
,, tubercular,	1	1	100·0	...	...	...
Metritis,	...	...	...	1	...	...
Morbus Addisonii,	1	...	...	...	...	...
Myelitis,	1	...	...	..	...	...
Nephritis, acute,	4	...	...	...	...	...
Neurasthenia,	1	...	...	...	...	...
Paralysis agitans,	1	...	...	...	...	...
,, alcoholic,	...	...	...	1	...	...
,, spastic,	1	...	...	...	...	...
Paraplegia,	1	...	...	...	...	...
Pericarditis,	2	...	...	...	...	...
Peripheral neuritis,	1	...	...	...	...	...
Perityphlitis,	1	...	...	...	...	...
Phlegmasia dolens,	...	...	...	1	...	...
Phthisis pulmonalis,	20	4	20·0	12	3	25·0
Pleurisy,	6	...	...	2	...	...
Pleuritic effusion,	...	...	...	2	...	..
Pleurodynia,	...	...	...	1	...	...
Pneumonia,	14	4	21·4	5	5	100·0

* Sent to Fever Hospital.

Disease.	Males.	Deaths.	Death-rate per cent.	Females.	Deaths.	Death-rate per cent.
Poisoning, bromide,	1	...	...	...	..	...
,, laburnum,	1	...	...	...	...	...
,, opium,	3	2	66·6	1	1	100·0
Psoriasis,	...	...	...	1	...	...
Rheumatism,	12	...	...	24	1	4·1
Rickets,	...	...	...	1	...	...
Sarcoma, multiple,	1	...	...	...	...	...
Sciatica,	4	...	...	...	...	...
Senile decay,	1	1	100·0	...	...	...
Splenitis,	1	...	...	...	...	...
Struma,	1	...	...	...	...	...
Syphilis, secondary,	1	...	...	2	...	...
Tabes mesenterica,	1	...	...	3	1	33·3
Tapeworm,	...	...	...	1	...	...
Tonic spasm of lower maxilla,	...	...	...	1	...	...
Tonsillitis,	...	...	...	1	...	...
Traumatic eclampsia,	1	...	...	...	...	...
Tubercular peritonitis,	1	...	...	4	...	...
Uterine scirrhus,	...	...	...	1	...	...
Vulvitis,	..	...	...	1	...	...
Valvular disease of heart,	11	1	9·0	11	3	27·2
Varix,	1	...	...	1	...	...

The foregoing shows that 165 males were treated, and that of these 22 died, being a death-rate of 13·3 per 100, or 133·0 per 1,000; also, that 172 females were treated, and that of these 21 died, being a death-rate of 12·2 per 100, or 122·0 per 1,000. In calculating the mortality of all the medical wards from the Annual Report of the Infirmary for 1892, I find that of the 1,243 males treated, 180 died, being a death-rate of 14·4 per 100, or 144·0 per 1,000; also, that of the 809 females treated, 100 died, being a death-rate of 12·3 per 100, or 123·0 per 1,000. Thus, my male death-rate is 13·0 per 1,000, and my female death-rate 1·0 per 1,000, less than the average mortality of the whole medical wards.

Fifteen *post-mortem* examinations were made of patients who had died of the following diseases:—

Females.

	Cases.
Acute general tuberculosis,	1
Chronic interstitial nephritis,	1
Acute rheumatism,	1
Gall stones,	1
Total,	4

MALES.

	Cases.
Valvular disease of heart,	3
Do. do., with granular kidney,	2
Cerebral hæmorrhage,	1
Tubercular nephritis,	1
Chronic interstitial nephritis,	1
Empyema,	1
* Bronchiectasis,	1
* Purpura hæmorrhagica,	1
Total,	11

The following general remarks on some of the cases seem worthy of note:—

Chronic Gastritis.—It will be seen that there were 14 cases of this affection, and 2 of gastric ulcer, all in the females, and only 1 case of gastritis in the males, although the total number of the females treated only exceeds that of the males by 7. The cause of this affection so largely preponderating in females is undoubtedly due to their sedentary habits, and to their drinking large quantities of tea,' and those usually long infused, often even boiled, whereby the tannin is dissolved out, which, constringing the gastric mucous membrane, causes congestion, hinders digestion, and induces chronic inflammation. Another result of these sedentary habits and the abuse of tea is chronic constipation. This condition, by partially, but continuously, blocking the venous circulation in the abdominal viscera, impedes the return current from the gastric vessels through the liver, and hence assists in causing gastric congestion, inflammation, and, of course, dyspepsia. Another, perhaps minor, contributory cause of the prevalence of gastritis in females, particularly in the class that gravitates with that affection to the infirmary, is indulgence in alcoholic liquors. This I have found to be the case chiefly in the married females who, beset with domestic worry, seldom go out of doors, and hence have recourse to this artificial mode of stimulation. In the treatment of gastritis, besides, of course, rest, farinaceous food, peptonised milk, and sometimes *lavage* of the stomach, also counter irritation, I have obtained the best results from creosote, nux vomica, and sodæ bicarb. in aqua menth. pip.; for vomiting, strontium, bromide, and nitro-glycerine are especially useful.

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* These deaths were from Ward 9, the half of which was recently put under my charge, for which reason the cases treated in that ward are not in the foregoing tables.

Pulmonary Tuberculosis.—With this disease it will be seen that there were only 12 female, whereas there were 20 male cases, and this although the total number of male patients was less than that of the females by 7. At the same time it is to be observed that the female mortality exceeded that of the male by 5·0 per 100, or 50·0 per 1,000. The cause of a greater number of males being affected is undoubtedly due to exposure to changes of weather, irregular habits and modes of life, and unhealthy occupations; whereas the higher female mortality may be attributed to a less robust constitution and a more delicate nervous organisation. It has often been suggested that such cases should have a hospital for themselves. With this I entirely agree; not, however, because I hold the disease as proved to be infectious, or at least practically so as treated in the Infirmary, but because the very great majority of such cases are hopeless, and simply take up beds that might be occupied by patients whose diseases are curable. There are, however, undoubted cases of tubercular disease of the lungs that do improve in the Infirmary, but the affection in these is always in the incipient stage, and no doubt their improvement is in great degree due to removal from an unfavourable environment and to the better dietary, hygiene, &c., of the hospital.

Pneumonia.—A serious disease at all times, especially so in females, of which there were 5 cases—all fatal; while, of 14 cases in males, only 4 died. Here again, exposure to changes of weather, also occupation, doubtless cause the disease to preponderate in males, while the comparative constitutional delicacy is the cause of the higher mortality in females.

Rheumatism.—Although this affection is common in our climate, it is the reverse of fatal, *per se*—*i. e.*, disregarding the cardiac valvular lesions it is apt to cause in young subjects. In the Registrar-General's Return for December, 1892, under "Rheumatic Fever, Rheumatism of Heart," only 5 deaths, and under "Rheumatism" only 2 deaths, are recorded in eight of the principal towns in Scotland, and this out of 3,102 deaths. It will be seen that I had 24 female and 12 male cases, with 1 male death, nearly all being acute. This proportion seems to indicate that the affection preponderates in females. In the Hospital Report for 1892, however, I find that, taking all the cases of rheumatism treated, the males slightly exceed the females.

As regards the medicinal treatment of acute rheumatism, sodium salicylate is a certain specific, discarding, of course, any cardiac valvular mischief that has occurred previous to treatment. It is quite common to have a rheumatic patient brought into the ward on a stretcher, as helpless as a child, the least movement of the body causing the most exquisite pain, and to find, after giving the medicine in 15 grain doses every four hours, day and night, in from twenty-four to forty-eight hours, the pain almost gone. As this drug is rapidly absorbed and excreted, it should be given at short intervals and continued during the night, in order to get its full benefit.

Chorea.—Of this peculiar affection, which has been called "Muscular insanity," there were 4 cases, all in females. General statistics show that about five-sevenths of the subjects of chorea are girls. One of my patients, æt. 14, was under treatment for three months. She was very severely affected and much emaciated, having also incipient phthisis and mitral regurgitation, but, like most choreics, recovered. Various sedative and tonic medicines were tried in these cases, but on the whole arsenic seemed to give the best results.

Opium Poisoning.—It will be seen that there were 3 males, with 2 deaths, and 1 female, who died, making 3 deaths in 4 cases. So far as could be elicited, they all had taken laudanum with suicidal intent. This drug seems a common suicidal agent with the working classes, 14 cases of poisoning by it having been brought to the Infimary during the year.

A peculiarity in opium poisoning is that, in some instances, there may be a very distinct though partial recovery, and afterwards a fatal relapse. This was the case with my female patient. She was brought to the Infirmary during the night by the police, and the usual remedies applied and given, amongst which was the inhalation of 3 cubic feet of pure oxygen at intervals. When I saw her on the following morning, her pupils were well dilated and responsive; she was fairly sensible, and had a good pulse, so that to all appearance she seemed out of danger—next morning, however, I found her bed empty and was told that she had died suddenly the previous afternoon, twenty-seven hours after being brought to the hospital.

One of the males, previous to his arrival in the Infirmary, had hot irons applied to his soles, warm enough to roast them nearly in their entire extent. After poulticing, to separate the dead tissue, they presented a red raw surface which kept him in bed some weeks after recovering from the effects of the opium. In none of the cases could the quantity of laudanum swallowed be ascertained.

Valvular Disease of the Heart.—With this very common affection, as stated, there were 11 males, 11 females, and 4 deaths—1 male and 3 females. The treatment in such cases, at the best palliative, was rest; cardiac tonics, as digitalis, strophanthus, convallaria, and spartein sulphate. I find that 30 grains of sulphonal dissolved in a warm fluid and given at night, often induces a few hours sleep in those cases of persistent insomnia resulting from aortic disease.

Land Scurvy.—The 2 cases of this rare affection were treated by the usual specific means—lime juice and fresh vegetables. One was a labourer, who had worked at that part of the railway at present being constructed in the wilds of Glenfalloch, between the head of Lochlomond and Crianlarich. He slept in a hut, and had lived for months on wheaten bread, tea, tinned salted beef, whisky, and mossy water. This was a very marked and chronic case. His whole body was more or less covered with petechial and bruise-like extravasations; there were puffy purplish swellings in the popliteal spaces; the lower parts of front of legs were brawny and ecchymosed; his gums also were spongy and swollen. He was under treatment fully two months, and latterly had a course of arsenic, yet was not thoroughly well when he left the hospital.

The other patient was a stocking-weaver, whose food for long was chiefly bread and tea. One of his legs was very bad, resembling those of the labourer's. Otherwise his case was comparatively mild, and under the antiscorbutic treatment he soon recovered.

Jaundice and Biliary Calculi.—It is remarkable that the 5 cases occurring under this heading were all females; also, that the entire cases of jaundice (7) in the hospital for the year were in females. The cause of this disease preponderating in women is undoubtedly in great part the same as that which produces so much gastritis in them—viz., sedentary habits, chronic constipation, to which may be added tight lacing, or the mere wearing of stays. Indeed, when the intimate venous circulation of the stomach and liver are considered, it will be obvious that the one disease is the counterpart of the other.

Laburnum Poisoning.—The single case was that of a boy who had pulled the pods from a laburnum tree in the Botanic Gardens, and eaten several of the seeds or peas. The effects were great nausea, vomiting, gastric pain, and prostration, from which he soon recovered.

Tonic Spasm of Lower Maxilla.—This curious case occurred in a German female, æt. 23, and was seen by Professor Gairdner. There were no pains nor swelling of the condyles nor masseters, and yet to open the jaw a metal tongue depressor, or the handle of a tablespoon, had to be worked in betweeen the teeth, then turned edgeways with great force, but on its withdrawal the jaw at once closed with a snap like a rat-trap. She was otherwise in perfect health. When taking food, which had always to be fluid, she kept her mouth open with the handle of a tablespoon on its edge, and poured in the food with the other hand, but she was often fed. I put her under chloroform, and then found that the mouth could be opened with ease, but it closed again as firmly as ever when the anæsthesia passed off. Many other remedies were vainly tried, as friction with stimulating liniments, blistering, painting with iodine, hot fomentations, injections of morphina, galvanism, stretching the jaw with a steel gag, &c. After being in the hospital for about two months the spasm somehow relaxed, and she was dimissed, leaving the impression that she was an expert malingerer.

Perityphlitis.—This single case was most severe and interesting. Patient, a male, æt. 24, a life-buoy maker, was admitted complaining of pain over the abdomen, marked tenesmus, and inability to defecate of four days' duration, also of persistent vomiting. The abdomen was found greatly distended and tympanitic, but there was dulness over the course of the ascending, transverse, and descending colon. The tract of the transverse colon was visible by its forming a ridge across the abdomen. There was acute pain on gentle pressure over the right iliac fossa, also decided dulness on percussion and slight swelling. The vomiting was very severe and persistent, the ejected matter being a dark green fluid and large in quantity. Temperature 100·6°; pulse, 160. Cold sweat over all the body; anorexia; face pinched and tongue coated with thick dark fur. The diagnosis by myself and a colleague was enteritis and perityphlitis. The remedies used were glycerine enemata, hot fomentations, turpentine stupes; also bismuth, belladonna, egg flip, milk and champagne. For about three weeks the case seemed hopeless. Eventually he began to improve somewhat, the pain, vomiting, and tympanitis subsiding, but a swelling about the size of an inverted saucer had formed over the cæcum. My consulting surgeon was asked to see the case, and we agreed that the swelling would probably prove an abscess, but he declined to operate from the low state of the patient. Hence constant poulticing was resorted to. Next morning after our consultation I was told that patient's bowels had spontaneously moved very freely, and on proceeding to examine the swelling I found it gone. Obviously it had consisted of an accumulation of fæcal matter that the poulticing had liberated by relaxing the spasm, or allaying the tumidity of the ilio-cæcal valve, which had been blocking the bowel. Following on this he had so severe intestinal catarrh that astringent medicines had to be given. After being in the Infirmary until 15th July—nearly three months—he was "dismissed well."

Morbus Addisonii.—The single case of this peculiar disease was in a locomotive engine driver, æt. 34. On admission the affection was pretty far advanced, and was attended with the usual symptoms of patchy bronzing of the skin about the face, neck, arms, abdomen, &c.; feeble rapid pulse; emaciation; pearly-white conjunctivæ, anorexia, and general cachexia. He remained only a short time in the hospital and left, as is usual in such cases, without improvement.

Abdominal Tumour.—It will be seen that two such cases were treated, both in females. One of these is worthy of special notice. Patient, æt. 21, seemed quite healthy, and worked in a soft goods warehouse. She complained of a dull pain near the umbilicus, that had lasted fully a year, and which she attributed to a "rack." A doctor had kept her in bed for a month, having the part painted with iodine and fomented, without benefit. On admission to the hospital, a dull, ovoid, convex area, about the size and shape of a longitudinal section of an ostrich egg, was found on the left side of the abdomen, its base being near the spleen, and its apex at the umbilicus. It was obviously in the abdominal wall, but whether solid or liquid could not be determined, and my assistant, Dr. Anderson, was told to make an exploratory aspiration of it. Next morning I found the swelling gone, and was then shown a glass beaker containing 22 ounces of straw-coloured fluid which had been aspirated from, and had, of course, formed the swelling. Its specific gravity was 1·8; it was non-albuminous, but on the addition of silver nitrate gave a copious precipitate of silver chloride. On examining it microscopically, several hooklets of the tænia echinococcus were found. Hence the swelling was a hydatid cyst. Patient left in a week, well.

THE PROCEDURE OF THE CROWN AS REGARDS *POST-MORTEM* EXAMINATIONS IN CRIMINAL CASES.

By JOHN LINDSAY STEVEN, M.D.

THAT considerable dissatisfaction at present exists among medical men in Glasgow as regards the Crown procedure in this important matter, the interesting communication by Professor James Dunlop, in the *Glasgow Medical Journal* of last month, abundantly proves. I have no desire to discuss Dr. Dunlop's paper in detail, but I could have wished that he had devoted more attention to the question of the just rights of the prisoner in charge, or the person likely to be charged, and less to the comparatively minor matters of professional courtesy. I cannot help thinking that, as a mere matter of ordinary justice, a prisoner should be represented by a medical man at a *post-mortem*, as well as by a legal agent in court. Nay, more, if the prisoner be poor and unable to pay the fees necessary to secure the attendance of an expert, such attendance should be provided by the Crown. So far as I can understand our present criminal procedure, in its medico-legal aspects, some such provision of this kind is absolutely necessary in order that the person accused, or likely to be accused, of crime may receive full justice. It is all very well for Professor Dunlop to argue that the crown experts are "expected to discharge their duties without bias—without knowing either a prosecution or a defence," but the fact remains that they never go into the box for the defence. They are always witnesses for the prosecution, and as such, their evidence, like that of any other witness, has to stand the fire of cross-examination. So long as the Crown experts are subjected to examination and cross-examination, it is absolutely necessary, if justice is to be done not only to the accused, but to the experts themselves, that the medical witnesses for the defence should have the opportunity of forming their opinions, not merely upon a perusal of the Crown report, but upon actual personal observation and study of the facts revealed at the *post-mortem* examination. It seems to me that, in arguing in this way, Professor Dunlop slips round the difficulty rather than meets it face to face. I could understand his position of "impartiality" if the medical experts for the Crown were constituted a medical jury or committee, whose report would be accepted as final both by prosecution and defence, but so long as that report is regarded as mere evidence for the prosecution, capable, it may be, of being entirely squashed and set aside by skilful cross-examination, I cannot accept it as an argument in defence of his position. I am very pleased that the public discussion of this important subject has been inaugurated by one of the Crown officials themselves, and am hopeful that a free expression of opinion may lead to some beneficial result.

EPITHELIOMA OF LEFT VOCAL CORD REMOVED BY LARYNGOTOMY.*

BY WALKER DOWNIE, M.B., F.F.P.S.G.,
Vice-President British Laryngological and Rhinological Association, &c.

WM. D. aged 50, an engine-fitter, was seen by me at the Throat Department of the Western Infirmary Dispensary early in August, 1892. He then complained of hoarseness which had persisted during the previous six months, though unaccompanied by pain, and as he looked upon the condition as the result of an ordinary cold, he had put off seeking advice. On examination, the whole lining membrane of the larynx was seen to be deeply injected, both ventricular bands were full, and, as a result, they obscured a great part of the vocal cords beneath. These latter were also deeply injected, and from the left one there was a tumour projecting into the glottis about three-eighths of an inch in length. In outline it resembled a horse bean, though smaller than such, and, unlike a papilloma, it appeared part and parcel of the cord from which it sprang.

In my opinion the diagnosis was clear, and I urged immediate operation, but as there was an entire absence of pain or other symptoms, which appealed to the patient as being of serious import, he desired to postpone any surgical interference. However, after thinking matters over, he decided to follow my advice, and was admitted to Ward III on the 12th September. On the following day I performed tracheotomy as a preliminary measure, and this, on account of the short thick-set form of his neck, was somewhat difficult, and it was found impossible to go as low down as is desirable in tracheotomy preliminary to thyrotomy. A Foulis' tube was inserted. On the 20th September I performed laryngotomy, in which the cricoid and the thyroid cartilages were completely divided in the middle line. The two sides of the larynx were then widely separated and held so, and with the interior brightly illuminated with a Trouvé lamp, the tumour was brought clearly into view. It was then seen that, though flat and somewhat like a bean when viewed from above, the tumour extended beneath and affected a large part of the under surface of the left vocal cord. Such a state of matters almost always exists in malignant growths connected with the vocal cords. With curved scissors I then carefully clipped away the whole of the left vocal cord with the tumour attached, and in doing so the points of the scissors were kept close to the outer wall, the cartilage of which was laid bare at some parts. After all bleeding had ceased, the raw surface was carefully gone over with the galvano-cautery, the interior of the larynx packed firmly with iodoform gauze, and the tracheotomy tube again placed in position.

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* Notes read, and patient exhibited, at a meeting of the Surgical Section of the Glasgow Medico-Chirurgical Society, 7th April, 1893.

Next day the packing was withdrawn and the whole interior of the larynx again carefully inspected with the help of the electric lamp, and when satisfied that no suspicious tissue remained, the cartilages were carefully replaced and the edges of the skin wound brought together with stitches.

On the 24th the tube was withdrawn, and the edges of the skin brought together with adhesive plaster. The highest temperature registered was 99·4° F., until he was allowed to get out of bed, when, apparently as a result, he developed sub-acute rheumatism, for the treatment of which he was confined to bed for close on a fortnight, and alkaline remedies administered.

On the 10th October he was dismissed, able to swallow freely and to speak with as clear a voice as previous to operation; and during the seven months which have intervened his voice has gradually improved, and there has been no recurrence of the disease.

During the production of voice his right vocal cord crosses over to meet the free edge of the left ventricular band, which has here, as it does in cases when a vocal cord has been destroyed by disease, assumed the rôle of a true vocal cord.

In conclusion, I have to thank Dr. Newman, who very kindly assisted me at both the tracheotomy and the major operation.

The sections of the tumour shown under the microscope were made for me by Dr. L. Sutherland, and demonstrate the structure to be that of a typical epithelioma.

SLEEPING ACCOMMODATION IN RELATION TO TUBERCULAR AND OTHER DISEASES.*

BY WILLIAM CULLEN, M.B., C.M.

IN considering the subject of sleeping accommodation in relation to health, as more properly perhaps this paper should have been entitled, my object is principally to draw your attention to a state of matters in Glasgow which has no equal in any other city; certainly not in similar proportions—I refer to the custom of sleeping in box and cupboard beds. As to who originated this style of bed, the historical interest attached to it, or the antiquity of it, I know nothing. That men were cave-dwellers at one period of our nation's history we know; but why the inhabitants of this city should in particular preserve and perpetuate the fashion is a conundrum for which I have no solution.

As to the exact number of those beds, this also is a matter which must to some extent be guessed at.

Our medical officer of health with a genius for, and love of detail, concerning all the domiciliary customs of this city, has hitherto not included any account in his periodical reports of the nature of its sleeping accommodation. However, from these we can form a proximate idea. In his census of 1891, Dr. Russell informs us that our population numbered 559,649 individuals, domiciled in 117,551 houses. This, of course, refers to the city proper, and does not include the extended boundaries. We have here a proportion of 4·73 inmates per house, and taking the average size of the house, there is fully more than 2 to each apartment. This density, however, increases as the size of the house decreases, until in the case of one-room houses the average number of inmates is 3¼. But in his famous and comprehensive address upon "Life in One Room," Dr. Russell adds: "Nor must I permit you, in noting down the tame average of fully 3 inmates in each of these one-apartment houses, to remain ignorant of the fact that there are thousands of these houses which contain 5, 6, and 7 inmates, and hundreds which are inhabited by from 8 up even to 13!" It is to the sleeping accommodation of these that I wish to draw your attention. As an address to which you can post them letters, there is nothing wrong specially with the number occupying one room; as a place where they can drop into and swallow their occasional meals there is still nothing specially wrong with the one room, for the door and the window are both open at intervals; but as a place to sleep in, or rather with a place off this place to sleep in, of the form of an enclosed cupboard, with the door partially open, or even in the form of a box with the front side off, then there is everything totally wrong. Remember that sleep requires at least a whole third of every 24 hours, and consider what the nature of the atmosphere which has been so frequently respired in that period, with all the other exhalations of the human system added to it, must be like. No wonder the sleep is deep, for it is partly toxic. No wonder those who go round to arouse the bread winners each morning for duty complain of the difficulty of awakening them.

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* Read at a meeting of the Glasgow Medico-Chirurgical Society, 3rd March, 1893.

Well, then, all houses consisting of one, two, and three rooms (and it must not be forgotten that the kitchen rates as a room) constitute 88·6 per cent of the total of the city, and we are within a safe margin in saying that 80 per cent of these are fitted with box and cupboard beds. But suppose even a less number, say even less than 60 per cent, and of our population we have fully quarter of a million under the necessity of sleeping in such recesses—quarter of a million people in one city spending more than a third part of their lives inside these sleeping ovens!

To the box bed much less exception can be taken than to the other with the door.

Let me describe a cupboard bed, or, as it is more commonly and accurately designated, a concealed bed. It is a construction wherein perverted ingenuity has carefully devised the most complete means of excluding the only two natural elements at the command of everyone—the essential atmosphere and equally essential light. Such a description, however, though true, is too indefinite. Suppose, then, a quadrangular cavity of well-defined size, to which admission is obtained through an ordinary door-way. The bed and bedding, forming a shelf about 4 feet from the floor, divides the space into two portions, and restricts the entrance of the sleepers to a hole somewhere in or over a yard square. The door opens in one of two places; most frequently entrance is at that point known as the head of the bed, but in many cases it opens in the centre. When it is closed the recess is as nearly as possible hermetically sealed, and this is the usual condition unless when occupied. In many cases, even when occupied, a great proportion of the family wardrobe is suspended from nails on the inner side of the half open door, and stale clothing neither improves the flavour nor assists the passage of ventilation. In addition, as if this sleeping receptacle were not full enough already, the remaining space above and around the sleepers is often filled with loaded shelves, while that division beneath the bed is crowded with all the refuse and trash conceivable, often including the soiled body-clothing, awaiting a more or less remote removal to the wash-tub, not to mention other and less mentionable things which fill space and defile the atmosphere. Too often, also, this region has to receive at night the children of the family, and I consider it to be one of the most pitiful sights met with by a medical man on going into one of these very poor houses late in the evening, and beneath the dim light of a cheap smoky lamp or candle, to notice little heads peering at you from beneath the bed like rats in a burrow. The instinct for warmth while asleep is probably one reason of the popularity of these concealed beds, more especially in face of the fact that bedding is never too plentiful, but there are other reasons; for, if a domestic institution is an acknowledged necessity according to the uses for it, this instituted form of bed has many claims to perpetuity, since it serves as bed, wardrobe, cupboard, dirty clothes' store, and lumber room. A complete study of it only proves that the instinct to hide things, themselves included, is a power amongst certain people. But then, although the condition of matters is dreadful to contemplate, the circumstances offer no alternative.

Regarding the ventilation of these beds, as they offer only one ingress for air and occupant alike, and as air cannot circulate without counter egress, it follows that the occupants must get an insufficiency of it, according to the most elementary principle of life, and as stagnant air is always vitiated, the necessary sequel is that slumber can never be got under such circumstances of a normal or refreshing nature. The result is a preliminary disturbance of the health in general, creating predisposition to a disturbance of it in particular.

But when disease enters this *cul-de-sac*, what follows? If a specific fever, the germs will find a resting place and breeding ground from whence no ordinary effort will dislodge them, even when it is attempted to do so; and as the vitality of germs is of indefinitely long duration, consider the permanent danger to those who seek that shelter.

The sword of Damocles is a metaphor of material mildness by comparison. The Infectious Disease (Notification) Act, 1889, will now, fortunately, have much effect in lessening this special danger; but it is an immeasurable distance off in dealing with a more general, an equally virulent, and a more insidious danger—namely, tuberculosis. Picture the poor consumptive coughing, sweating, and spitting his life away in a den like this; buried alive amid tainted bed clothes, and hidden from the light and breath of day. Before this audience it is unnecessary for me to detail painful and harrowing instances of this nature. To lie in this hole-and-corner is the first imperative demand of their circumstances, and what under such circumstances can be done to ameliorate their condition?

If there is any analogy whatever between human life and plant life, it is in their mutual demand for light and air, and a plant withdrawn from exposure to these influences will not more speedily or surely show the symptoms of decay than does the afflicted unfortunate confined within this sleeping dungeon. Conceive him spitting infected sputa all around him at random; as he cannot see where he is expectorating, should his face be averted from the doorway, it follows that he cannot be particular upon the point—it may be into a handkerchief, more likely it may be into a mug, and equally probably it may just be anywhere for convenience. The walls certainly will have a share, and if he be an old smoker who has learned precision in expectorating, there is no part of his enclosure safe from attack. As the illness proceeds, the amenities do not improve; the whole atmosphere of his bed-cell becomes stifling, smelling, offensive, and intolerable to the last degree, until we realise the literal truth of what is meant by a "hot-bed of disease."

This patient dies of course, and if he be the head of the family, his death is followed by the family's removal—there is usually a change of dwelling in any case—and a new family promptly takes possession. No preliminary bother with landlord or factor occurs in discussing improvements or alterations; no preliminary visits for the purpose of cleansing; before the hearth has got cold the newcomers are already domiciled.

There may be an attempt at cleaning and putting the house in order in a day or two after settling, but this settling may never occur, for the wants of a floating population are few. Besides, the principle that changes are lightsome is a custom with an established hold upon tenants of this size of house, and you will find them removing from one to another vacant house from the most fanciful of reasons, and with a rapidity which tasks their medical attendants somewhat to follow them when hunting for past fees. With such instincts, one can understand that the gospel of cleanliness does not receive much practical application. Hence the infected concealed bed remains infected. It is a common observation that there are some localities or tenements of houses from which the doctor is never absent. This is one of the reasons. In these concealed beds, concealed of themselves from the light of day, there is much else concealed from the light of the eye. Familiar instances will occur to your minds of families who have been almost if not quite exterminated in such houses by tubercular disease. Heredity is not the only explanation to be given for this; there is less marvel in accounting for it, in considering the fact that one member sleeps with the other, or follows the other in sleeping in this death-trap.

In 1886, and writing with the facts before him, Dr. Russell states that diseases of the lungs are the scourge of Glasgow; that it is from them that the mortality of Glasgow must be redeemed, and consequently their comparative fatality is of supreme interest as the measure of success, or the failure in effecting removal of their physical causes, which has attended recent endeavours to improve the sanitary conditions of the population; that these diseases have never in any one year contributed less than 31 per cent of the total deaths, and they have frequently contributed 38 per cent.

Where density of population is greatest, so is mortality; and St. Rollox district, with which I personally am most familiar, is the most densely peopled in Glasgow, containing 350 persons to the acre of area. The fact is, that many of the beds here never get cold. As those who have rested in them rise for the labours of the day, others who have been employed during the night occupy them again until evening. The wonder is not that diseases of the lungs contribute a full third of the death-rate, but that they do not contribute more. The human body can accommodate itself to much no doubt, and it can submit apparently even to a fair amount of this treatment — upon the principle, I presume, of a well-known physiological experiment. Place a pigeon in a glass jar, and gradually add CO_2. That pigeon will continue to live in an atmosphere which is immediately fatal to a fresh pigeon if plunged into it suddenly.

In Dr. Russell's report last quoted, he very properly maintains that more radical measures are required to raise the standard of purity of the air, both outside and inside the houses of our population. Undoubtedly, and where is there a better mode of beginning this purpose than in demolishing those concealed or box beds, and adding their space to their respective apartments?

Architecturally, this is in most cases a comparatively easy and inexpensive matter. It may not strike any of us who are present or prospective proprietors of tenement houses in this point of view, as business, but good business is not always good sense. The fact, at any rate, that our small houses could be so enlarged makes it appear absurd that they are not.

In Dr. Russell's authoritative language, it is those small houses that produce the high death-rate of Glasgow. It is those small houses which give to that death-rate the striking characteristics of an enormous proportion of deaths in childhood, and of deaths from diseases of the lungs at all ages. Their exhausted air and poor and perverse feeding fill our streets with bandy-legged children. There you will find, year after year, a death-rate of 38 per 1000, while in the districts with larger houses it is only 16 or 17. Of all the children who die in Glasgow before they complete their fifth year, 32 per cent die in houses of one apartment, and not 2 per cent in houses of 5 apartments and upwards.

Helpless children, of course, are most affected, for the reason that their whole existence almost must be spent within doors; and the main source of their fatality is the ever-present tuberculosis.

In thus drawing your attention this evening to the sleeping accommodation in the houses of this city, I have spoken of an existing condition, whose important influence on health cannot be exaggerated. I hold that, in my own opinion, reform in the sleeping accommodation is the most vital proceeding left in the perfection of the sanitary condition of Glasgow. The provision of bed places is not a necessity with landlords in getting their houses let, nor is the possession of bedsteads a difficulty. Iron bedsteads may be had for a few shillings, and with an increased demand increased value for this sum will follow. With four bare walls, without enclosures or recesses, a much higher standard of air space will be supplied to every house; with no concealed den into which to throw or hide every odd thing, there will be less chance of these odd things existing, to the detriment of the standard purity of the atmosphere, and with an iron bedstead on the floor and beneath the eye of everyone, there is at least more hope of the bedclothes having a higher degree of cleanliness.

With these objects in mind, I did not feel inclined to support Dr. Workman's proposal of a year ago in favour of a hospital, believing that reform here would tap tubercular disease nearer its source, and believing that the best memorial we could make would be to the Dean of Guild Court, asking them to treat concealed beds as they have treated those abominations which also existed within the inner walls of houses—water-closets. If they can insist upon the latter being removed to the outer wall of the building, they surely might insist upon the abolition of this other. I question whether it would be as expensive an alteration—in most cases the expense would be at least no greater. One thing certainly this court can do, were their attention directed to it—they can easily stop their erection in new houses, which they are not doing at present, because to my knowledge new blocks, quite recently erected in Shawlands, Mount Florida, and East Pollokshields, not referring to those in the city at all, are all amply provided with this form of bed-place. Improvement in this particular would have a scientific value over countless hospitals—it would also be an amplification of the fact that prevention is better than cure.

Cattle in common with mankind are subject to tuberculosis, but we do not erect hospitals for them; we simply look after their housing and sleeping accommodation. I would say that this was an application of unprejudiced common sense on their behalf. I believe it is, and I believe it to be the proper line of treatment in dealing with this malignant and general scourge of our populations.

I have here sketched in barest outline, and in the most superficial fashion perhaps, a subject upon which much can be said, and which appeals to our influence very directly. I have stated no objections against the concealed bed from an obstetrician's point of view, although I have had my share of difficulties of this kind; I have simply brought the subject under your notice for discussion, and if the feeling of the meeting is in that direction, a motion might be formulated seeking the interference of the Dean of Guild Court in the matter, unless, as usual, I am out of order, and ought to have had it tabled beforehand.

CURRENT TOPICS.

THE ROYAL INFIRMARY AND THE EDUCATION OF WOMEN.—We understand that a special meeting of the Managers of the Royal Infirmary was held on the 13th ult. to consider the report and recommendations of a Committee which has been reviewing all the facts connected with women students, and ascertaining whether and how far it was possible to afford them greater educational advantages.

After full and painstaking investigation, and after hearing the views of many members of the Infirmary staff and a deputation from the male students, the Committee recommended that, in addition to the ward facilities they already enjoy, the women students should also attend three days weekly in the ward for female diseases; that, in the Dispensary where four rooms are constantly in use, the women should attend three days weekly in one room in the surgical department, and three days weekly in one room in the medical department; that they should attend once a week at the Dispensary in each of the special departments, skin, ear, &c.; and that they should also receive instruction in vaccination, all this instruction to be given separately from the men students.

The Committee had received the willing consent of all the members of the staff concerned in these proposals, and had also received their assurance that they could be carried out without any injury or injustice to the men students.

These recommendations were accepted and approved by an overwhelming majority of the Managers, the few dissentients only asking for delay and further consideration in the interests of St. Mungo's College. This College has somewhat unfortunately, as we are inclined to think, committed itself to the policy of excluding women from its education, but there is no reasonable justification for their opposing the more liberal policy of the Infirmary Managers, since the clinical material is vastly more than its students can possibly require.

We cordially congratulate the women students on this great extension of their privileges, and we approve in the strongest manner the liberal and progressive spirit shown by the Managers.

UNIVERSITY OF GLASGOW.—The following have passed the first professional examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

James Adam, James Francis Agnew, William Allen, John Anderson, M.A.; Francis James Barker, M.A.; William Stevenson Blair, Henry Broom, John Ritchie Brown, Charles Hodge Cairns, Donald M'Gregor Campbell, Frederick Burdett Cormick, Peter Latimer Leitch Craig, M.A.; John Crawford, John Arthur Clark Doonan, Charles Elphinstone Fleming, Joseph Green, William Hansen, George Hanson, Arthur Holt, Gavin Dalzell Hunter, Edwin Brook Jago, Frederick James Jayne, James William Johnstone, Archibald Livingston, John Lunn, John M'Ewan Manford, M.A.; James Andrew Dixon Mulholland, Donald Munro, Neil M'Callum, John Allan Craigie M'Ewen, Edward Mackay, William Jones Mackinnon, Alexander M'Donald Nevin, William John Orr, James Malloch Robertson, John James Robertson, John Neil Robertson, William Kerr Russell, James Smith, Henry Hyslop Thomson, Joseph Milton Thornley, Charles Kirk Toland, Harry Muir Watson, Herbert Yearnshaw.

Women Candidates.—Kate Isabel Clutterbuck, Edith Ellen Goodrich, Mary Philip Graham, Norah Kemp, Elizabeth Dorothea Lyness, Madge Speirs Maclean, Mary Roe Riddall, Roberta Henrietta M. Stewart.

The following have passed the undernoted portions of the first professional examination for the new degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.):—

I. *In Botany and Physics.*—George MacLellan Blair, William Adam Burns, John Laird Simpson, Matthew Logan Taylor.

II. *In Botany and Chemistry.*—Andrew James Smith.

III. *In Zoology and Physics.*—Robert Carswell, M.A.; Walter Scobie Findlay, M.A.; Dugald M'Kinlay, James M'Queen, M.A.; James M'Whir, Robert Wylie.

IV. *In Zoology and Chemistry.*—David Louis Cairns, Francis James Charteris, James Duncan Cochran, Samuel Macfarlane Sloan.

V. *In Physics and Chemistry.*—Douglas Swan.

VI. *In Botany.*—Alexander Smith Allan, Murdoch Macdonald, William Wyper.

VII. *In Zoology.*—James Strang.

Women Candidates.—In Physics and Chemistry.—Mary Gardner, Jessie Hawkesworth Smith.

The following have passed the second professional examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

Robert Aitkenhead, Arthur Roland Anderson, John James Anderson, Thomas Angus, Alexander Blair, James Boyd, William

Burns, James Soutar Christie, Allan Aitken Clark, James Donaldson, John Sharp Douglas, John Drummond, Richard John Edwards, William Bickerton Edwards, Samuel English, Daniel Ferguson, Albert Alfred Finkelstein, James Forrester, Andrew Fleming Galloway, John Guy, James Henry, Francis Robert Hill, John Affleck Hope, Albert Barnes Hughes, John Hunter, David Kerr, William James Kerr, William Henry Lang, Arthur Lowton, David Lewis, James Duncan Love, James William Otto van Millingen, John Morton, George Bain Murdoch, John Murray, Daniel M'Coll, William M'Cormick, Donald MacDonald, John M'Laws, Moses Neil MacLay, Samuel M'Lean, Farquhar Macrae, Archibald Russell Oliver, Wallace Ainsworth Pride, Daniel Richmond, Alexander Shearer, Hugh Stevenson, James Stewart, Ernest Frederick Docetti Walker, James Wells.

Women Candidates.—Alice Lilian Louisa Cumming, Margaret Cochran Dewar, Marion Gilchrist.

The following have passed the third professional examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):--

A. *Including Pathology.* Robert Bruce, Edward Napier Burnett, Joseph M'Naughtan Christie, John Donald, Thomas Blackadder Gilchrist, Clarence Barrymore Harrison, James Jack, Adam Kay, Thomas Kay, James Lang, John Masterton, John Colin Matheson, Duncan M'Fadyen Millar, Joseph M'Feat, James Campbell M'Neilie, Allan M'Lean Robertson, John Crawford Robertson, Geddes Graham Russell, William Salmond, Archibald Neil Sinclair, Robert Tennent.

B. *Not including Pathology.* William Thomas Ainsworth, Henry Albert Bodeker, Thomas Scott Brodie, Archibald Campbell, Daniel George Carmichael, Thomas Crossan, Henry Davies, Alexander Dingwall, M.A.; David Dinwoodie, William Moyes Duff, William Cameron Faulds, George Willmore Francis, Charles Lorn Stewart Gibson, Ernest William Graham, George Innes, M.A.; Peter Marshall, William Edgar Macharg, Alexander M'Phail, John Cormack Paterson, Daniel Evans Powell, John Robertson, Joseph Scott, William Shedden, Thomas David Smith, James Wells.

The GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—The eighth and last ordinary meeting of the Society for the present session will be held in the Faculty Hall, 242 St. Vincent Street, on Monday, the 8th inst., at 8 o'clock. The following specimens and cases will be shown:—By *Professor George Buchanan*—(1) A large exostosis removed from the lower end of the femur; (2) epithelioma which developed in the scar of an old lupus of the face; (3) scirrhus of mamma removed from a man. By *Dr. T. Spence Meighan*—A case of right hemianopia of intra-cranial origin. By

Dr. Donald Macphail—A specimen of a deformed fœtus, synpodia, &c. By *Dr. Donald Fraser*—(1) A case of muscular atrophy of the arms; (2) a case of atrophy of the deltoid and infra-scapular muscles of trumatic origin, &c.

The London Post-graduate Course.—We have received the prospectus of the summer term of the fourth year of this post-graduate course. Under the presidency of Mr. Jonathan Hutchinson, the Executive Committee have succeeded in issuing a most attractive syllabus for the months of May and June, 1893. The days and hours are carefully arranged, so that gentlemen may be able to overtake a very wide variety of subjects. The prospectus contains a handy map showing the sites of the different hospitals and schools, and our readers desirous of information may write to Mr. J. Fletcher Little, M.B., 32 Harley Street, Cavendish Square, London, W.

The Chicago Exhibition.—At a meeting of the Joint Committee of the Chicago Medical Profession on World's Fair Entertainment, held at the Sherman House, November, 1892, the establishment of a Bureau of Information and Service was delegated with approval and endorsement to Charles Truax, Greene & Co., the Committee reserving to itself the duty of such social entertainment of visiting physicians during the continuance of the Exposition as may seem desirable. This action was confirmed at the final meeting of the Joint Committee, 25th February, 1893, and, on application of the Practitioners' Club and the South Side Medical Club, the matter of social entertainment was delegated to them, with full authority to act in the capacity of entertaining bodies, with retention of the Chairman and its American and Foreign Secretaries already appointed.

Chairman, ...	Dr. Chas. Warrington Earle.
American Secretaries, . .	Dr. Archibald Church. Dr. Geo. Henry Cleveland. Dr. John C. Cook. Dr. J. C. Culbertson.
British Secretary, . . .	Dr. Sanger Brown.

The scope and duties of the above secretaries will be designated in the future.

REVIEWS.

Cheyne-Stokes Respiration. By GEORGE ALEXANDER GIBSON, M.D., D.Sc. Edinburgh: Oliver & Boyd. 1892.

THE contents of this volume have already been published in the *Edinburgh Medical Journal*, but they are certainly well worthy of their reproduction in this more compact form. We cannot sufficiently admire the thoroughness of Dr. Gibson's work, and the painstaking care which he has bestowed upon the study of the literature of his subject, as well as the clearness with which he describes and criticises the views of others and states his own. While heartily recommending his book to the perusal of our readers, it will not be out of place to indicate its main features. The historical investigations have claimed 88 out of 130 pages, the leading arguments of the different authors (of whom there are over 170 referred to) being often quoted in full. The second section is devoted to clinical considerations, and discusses the various circumstances in which Cheyne-Stokes respiration may arise. Six cases are detailed as illustrating the simpler and the more complicated forms of the phenomenon and its association with other clinical facts. Some tracings obtained by the stethograph are given. In the third and last section, that named "critical," the various recorded views upon the subject are grouped and analysed, a good deal of the matter of the first (historical) section being here repeated. The physiology of the nervous mechanism controlling normal respiration is also discussed, and, having enquired as to periodic changes of rhythm under physiological conditions, Dr. Gibson summarises his conclusions as follows:—

"A careful study of the entire phenomena must lead to the adoption of the view that Cheyne-Stokes breathing is but one of a complex group of associated symptoms, as has been so clearly pointed out in the suggestive contributions of Rosenbach. Why there should be such diversity of phenomena connected with the pulse, eye, and mind it is at present impossible to answer. In one case there may be no periodic phenomena except the respiratory, and in another the entire complex of symptoms—mental, visual, circulatory, and respiratory—may be present. It is only possible at this time to hazard the suggestion that the centres involved in each group of symptoms may be affected singly or collectively. Reasons have been given for believing that there may be well-marked periodicity of mental functions, or of circulatory functions, without any similar change of rhythm in the other systems. In what respect these various symptoms are linked it is not with our present knowledge possible to state, and it is equally difficult to assign any reason for the fact that it may appear as an isolated phenomenon, or as part of a complex of symptoms.

"The essential cause of the symptoms is without doubt a periodic variation in the functional activity of the automatic centre for respiration, and the philosophical work of Luciani must be credited with having for the first time established this fact. Whether the periodic variation depends simply upon the loss of the influence of higher regulating centres, or whether it is also at the same time the result of diminished vitality, in accordance with some great natural law, it is not at present in our power to decide."

Malignant Disease of the Throat and Nose. By DAVID NEWMAN, M.D. Edinburgh and London: Young J. Pentland. 1892.

IN this volume there are four distinct sections, the number of chapters devoted to each being pretty much determined by the number of cases seen by the author. He begins with a selection of cases illustrative of stricture of the œsophagus, not confining himself, however, to cases of malignant disease, but including cases of cicatricial stricture of the gullet, syphilitic stenosis, spasmodic stricture and dysphagia due to aneurysm of the arch of the aorta. The details given of those as well as of the other cases are interesting, though several might be more concisely stated; and the author's remarks on the methods of examination, and especially his warnings against the incautious and too frequent passage of bougies in cases of suspected stricture, are to be commended.

Amongst other operations, he fully describes gastrostomy which he performed successfully in four of the cases. The operation is performed in two stages. In the first the stomach is exposed and stitched to the parietes, and the second consists in opening the stomach after firm adhesions have formed, by which precaution the danger of escape of the contents of the stomach into the peritoneal cavity is obviated. There are eight cases of malignant disease of the larynx given in detail, in one of which the tumour was removed by thyrotomy, and in another the larynx was excised.

The examples of malignant disease of the nasal fossæ are perhaps less instructive than the examples of malignant disease affecting the tonsils. The author, like some other observers, has been able to demonstrate cases in which epithelioma has had its starting point in the tonsil. His practice of removing a small portion of the tumour for microscopic examination is to be deprecated, as being at best of but doubtful service to the surgeon. Though it may be interesting to the pathologist to thus demonstrate the structure of the growth, such practice may be fraught with serious consequences to the patient.

As it is of advantage to occasionally pause in our work and review what has been done by others as well as by ourselves, and compare results, this collection of cases seen by the author, and the statistics illustrative of the experience of others now before us, form a useful and interesting volume.

Notes on the Newer Remedies. By DAVID CERNA, M.D. Philadelphia: W. B. Saunders. 1893.

WE have in this small book a series of short notes on some of the materials which have been introduced to the profession as remedies during the last few years. Information is given both as to their chemical and physical properties, and also as to their therapeutic uses. The statements under the latter head are somewhat general, and no authorities are quoted for the recommendations adopted. It is, however, on the whole, a convenient reference manual for those who desire some guidance in the use of recent synthetic remedies. To the term "newer" is given a rather wide interpretation, for we meet in Dr. Cerna's book with such comparatively old friends as nitrite of amyl and butyl-chloral hydrate.

A Session's Work in an Infant Department, and How to Overtake it. By MISS RITCHIE, Hillhead Public School.

THIS pamphlet gives in outline a year's work in the infant department of the Hillhead Public School, Glasgow, and has been drawn up by the head mistress of the department, Miss Ritchie. We have very great pleasure in commending this little work. It displays an amount of ingenuity and insight into the needs of infant education that stamp its authoress as a most thoroughly competent instructor in a highly important department of education. "Well begun is half done," and there is no doubt that under the system here outlined the work is well begun. A time table is given, which shows that school hours for infants is from 9 to 1. There are two short intervals for play, and a longer interval of fifteen minutes, besides time occupied in singing, sewing, and drill. Of course there is the usual work of reading and spelling from books and blackboard, but what has most struck us is the great variety in the lessons, and the very great ingenuity shown in the methods of instruction. The senses are trained and the child is taught to observe and describe articles which are brought into the classroom. On the first pages there are lessons in Natural History and in Physiology and Geography, then further on Training of the Senses, Moral Lessons, Composition, &c. It may be thought that this work is too advanced for an infant class, and that the evil of "cram" must here be rampant. The writer of this notice can testify that this is certainly not the case. All depends upon the manner in which the system is carried out, and it can be done so as to expand the young mind, and to make school a pleasure. We print a page of this synopsis so as to give a more accurate idea of its scope:—

HUMAN BODY.

PHYSIOLOGY.

Names and uses of different parts.

Skin.
Hair.

Blood.
Bones.

The Senses.

SOURCES OF FOOD.

FROM

Animals.
Flesh.
Milk.
Butter.
Cheese.
Honey.

Plants.
Roots.
Stems.
Leaves.
Flowers.
Fruit.
Grain.
Bark.

Minerals.
Water.
Salt.
Plants.

SOURCES OF CLOTHING.

FROM

Animals.
Wool.
Hair.
Fur.
Silk.
Feathers.
Leather.

Plants.
Cotton
Linen.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1892-93.

MEETING IX.—3RD MARCH, 1893.

The President, DR. JOSEPH COATS, *in the Chair.*

I.—CASE OF SPURIOUS KELOID.

BY DR. JAMES A. ADAMS.

The case shown by Dr. Adams will be made the subject of a future communication (illustrated). In the meantime the following details may be mentioned:—

The patient, J. B., was 26 years of age, and a miner by occupation; he had been admitted to Ward 23 of the Royal Infirmary on 9th February, 1893, complaining of inability to move his left elbow, and of accordingly being prevented from working. His family history showed no trace of hereditary disease; he was married, and his wife had borne healthy children. He had suffered from sore throat at a time when the rest of the family had had scarlet fever; he had had recurrent attacks of rheumatism, and had also been the subject of a temporary chest affection; otherwise, however, his general health had always been good. He denied having had any venereal disease, and there was no reason to doubt his denial.

In November last, he had sustained a burn from an explosion of gas while at work in the pit; the burn had involved both arms, and both sides of his chest and of his face. He had been treated for it in the Royal Infirmary and been dismissed at Christmas, at which time the scars from the burn had been white. Subsequently his present condition—spurious keloid of the scars in question—had developed, beginning in the form of "pimples," which had increased in size and run together. At first the affected parts had been the seat of lancinating pains, which had been most severe when patient became heated or perspired; now there was no pain but itching, and at times prinkling sensations troubled him. The growths might be seen to cover most of the surface of the fore-arms, and to be present in isolated patches on both sides of the chest, and of the neck, and on the left ear; except on the fore-arms, they did not occupy the whole of the areas of cicatricial tissue. On some of the larger growths desquamation had commenced. The movements of the left elbow were interfered with. The patient was otherwise healthy, and would be at his work were it not for the hindrance occasioned by the defective movement of that joint.

Dr. Adams purposed operating to remove that hindrance. At one or two spots he had in the meantime been using electrolysis tentatively, as some of the growths had a strangled appearance suggestive of nævus.

The patient was shown, as were also a number of photographs illustrative of his condition.

Dr. M'Call Anderson said that the disease was a well recognised one, and was dependent upon an excessive development of fibrous tissue in the cutis. For reasons not yet understood, certain people seemed to have a special tendency to such development whenever their skin was injured by burn or otherwise. He had known a case of acne in which the removal of comedones was followed by this result.

With regard to treatment, the evidence was rather against any operative interference, particularly against anything which might prove irritating; on account of this tendency to develop further fibrous tissue, the operation might only lead to an extension of the disease. The indications were rather to try something soothing.

In reply to *Dr. Adams,* Dr. Anderson added that false keloid was comparatively common, though not usually so extensive as in the present case; true keloid was rare. He answered in the negative a question by *Dr. Coats* as to the tumours having any infective nature or tending to extend beyond the cicatrices.

Dr. Adams remarked that not only were the growths limited to the true skin, but that there seemed in his case to be a lax condition underneath, allowing of their very free movement.

Dr. Anderson said that the seat of the growths was immediately under the papillary layer of the corium, which layer escaped along with the epidermis.

II.—NOTES OF TWO CASES OF LEUKÆMIA IN YOUNG CHILDREN, WITH MICROSCOPIC PREPARATIONS.

By Dr. Middleton.

Dr. Middleton's paper appears as an original article at page 356.

Dr. R. M. Buchanan, in submitting the report of microscopic examination, which is incorporated with Dr. Middleton's paper at page 359, said that the specimens did not indicate any special pneumonic condition, the cells in the alveoli corresponding with those seen in the capillaries in the alveolar walls, and thus having presumably passed from the vessels into the alveoli.

Dr. Middleton stated that the macroscopic appearances were those of grey hepatisation.

Dr. R. M. Buchanan said that the condition he had described would give rise to naked-eye appearances very much the same as those of pneumonia.

Dr. Coats spoke of the recent advances which had been made in the investigation of the blood from such cases. He was very much interested in the subject, and would be glad if any members who had similar cases would send him cover-glass preparations for examination. Dr. Middleton's cases belonged to the group in which large mono-nucleated leucocytes were in excess; he had himself had opportunity of ascertaining that it was so, having examined the specimens from the first case and the blood from the second. His opinion as to the lung coincided with that of Dr. Buchanan, and he suspected that in leukæmia a good many of the lesions were exudative, and that it had been so in this lung.

Dr. Middleton suggested that, if that were so, it might have been expected that the lung would have had the appearance of purulent infiltration: he quoted the expression "suppuration of the blood," which Dr. Bennett had used in his first observation of the disease.

Dr. R. M. Buchanan added that the examination of the specimens left no doubt that the cases were true cases of leukæmia, and of that type called "spleno-medullary," and associated with a great increase in the number of the ordinary leucocytes, and also of the large cells found abundantly in the bone-marrow. He agreed with Dr. Middleton in disputing v. Jaksch's statement that there could not be leukæmia without enlargement of the liver. He had been much struck with the rise of temperature in these cases. He was familiar with rise of temperature as a characteristic of Hodgkin's disease or lymphadenoma, but not with rises of temperature in leukæmia unless from some intercurrent disease.

One of the specimens shown had been stained with Biondi's reagent to show the characters of the corpuscles (*cf.* p. 153 of this volume, *Glasgow Medical Journal*).

Dr. Alex. Robertson spoke of a case of leukæmia which had been under his care, details of which were published by Dr. T. K. Monro in the *Glasgow Medical Journal*, 1892, vol. i, p. 349. He referred also to the subdivision of cases of leukæmia according to the size of the white cells present—those in which the leucocytes were large being considered to be associated with splenic enlargement, those in which the leucocytes were small with lymphatic glandular enlargement. The proportion of red blood corpuscles quoted as present in the blood would seem to indicate that there was no deficiency in the transformation of white into red corpuscles, but an excessive production of white.

III.—PAPER ON "SLEEPING ACCOMMODATION IN RELATION TO TUBERCULAR AND OTHER DISEASES."

By Dr. William Cullen.

Dr. Cullen's paper appears as an original article at page 375.

Dr. A. K. Chalmers said that the matter which Dr. Cullen had treated of was prominent in the minds of the Health Committee. In illustration of the point that other factors, such as drainage, must play an important part in the etiology of tuberculosis, he referred to the case of a village in Dumfriesshire, where the mortality from tuberculosis was double that of Glasgow, though the housing and bedding arrangements were immensely superior.

Dr. Alex. Robertson thought the country box-beds superior to those of the town, in that the former were without doors.

Dr. Beath Henderson spoke of a much better plan he had seen in the North of England, where there was used what served as a "bed by night, a chest of drawers by day."

Dr. Erskine felt sure that the most recent tenements in town were fitted without box-beds, and argued that this was more consistent with economy in building. He did not think that Dr. Cullen had proved anything with regard to tuberculosis, though there was no question that the sleeping arrangements he had referred to were productive of a low state of vitality.

Dr. M'Lachlan (Dumbarton) had had some experience as a landlord, and stated that houses without box-beds did not let well.

Some discussion took place as to the propriety of the Society memorialising the Health Committee or the Dean of Guild Court, but it was pointed out that the latter body could only follow the instructions laid down for it by law, and it was decided not to move in the matter.

Dr. Chalmers explained that the present Glasgow Act insisted that free circulation of air should be provided, and that this was being attended to in new tenements. The Workmen's Dwelling Company was also doing good work in this direction. The removal of already existing box-beds could be obtained only on a house being declared "uninhabitable."

Dr. Cullen, in reply, said that the prevalence of tuberculosis in the village quoted by Dr. Chalmers might be explained by heredity and consanguinity from frequent intermarriage.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

PHYSIOLOGY.

By WILLIAM SNODGRASS, M.A., M.B., C.M.

The Anaërobic Function of Animal Tissues.—It was long held that the tissues of animals, irrigated with blood and impregnated with oxygen, live an essentially aërobic life, in contradistinction to many of the lower forms of the vegetable kingdom, such as the yeast plant or bacteria, which can live and reproduce themselves in a medium devoid of oxygen, and give rise to reduction products, such as alcohols, and bases charged with carbon and hydrogen, substances which it was supposed the oxygenated animal tissues did not produce.

That the animal tissues may likewise have an anaërobic series of functions was first suggested by Pasteur in 1879, and, in 1881, M. Armand Gautier discovered that the tissues of large animals produce, in their normal condition, bases more or less toxic, the *leucomaines*, several of which are of similar nature to the putrefactive ptomaines. Gautier's researches, prosecuted since then, lead him to the conclusion (see *Archiv. de Physiol. Norm. et Patholog.*, January, 1893) that about a fifth part of the oxygenated products excreted by the animal organism is formed by a direct breaking up of the tissues and food stuffs without the intervention of free oxygen. His experiments establish that the phenomena of fermentation and of dissimilation which go on in the tissues are not stopped abruptly, when these, removed from the living being they had formed, no longer receive the nervous excitation and afflux of blood which formerly supplied oxygen and removed excrementitious products. Removed from the animal and left to themselves, sheltered from external ferments, and in a medium without air, these tissues are not sensibly altered for an indefinite time at a temperature of 0° C.; but when raised to a temperature of 15° C. or 20° C., they begin again to exercise certain functions, and by the help of their ferments, continue to modify their constituent substances so long as their nutritive reserves permit. As in the living animal, these changes are much hastened at 35° to 40° C., but in muscle, for example, cut off from the blood stream and all nutritive exchanges, this dissimilation soon ceases from destruction of reserve material and from accumulation of products of denutrition which alter the constitution of the cells.

This anaërobic function of the tissues in the organism is veiled in life by the continual access of oxygen, but can be easily studied under altered circumstances. In muscle, protected from access of air and outside ferments, we see accumulating substances, which are only got in traces in the living animal, which, indeed, are destroyed almost as soon as formed. Muscle thus preserved loses a notable portion (56 per cent) of its soluble albumins, transformed partly to casein and nucleo-albumin, partly to peptones, partly to alkaloids more or less toxic. Glucose and glycogen are used up, and it becomes slightly acid. On the other hand, it preserves nearly unchanged its fats and myoglobulin. It produces hardly a trace of ammonia, of lactic or fatty acid. From its substance it gives off spontaneously, and by simple anaërobic fermentation, carbonic acid, a little nitrogen and hydrogen, accompanying a small amount of alcohol, and certain undetermined reducing principles. Such substances are got *in traces only* in the muscle of the living body, and the mechanism of their production was unknown, but these are accounted for by the anaërobic function of the cells. The animal differ from the vegetable cells, however, in the manner of their anaërobic action, which is not, as in the latter, of a putrefactive nature. Neither urea nor carbonate of ammonia appear in sensible quantity. Fatty bodies are not produced, the carbohydrates entirely disappear, transformed, not to lactic acid, but to carbonic acid, alcohol, and reducing substances.

By accumulating the products of anaërobic fermentive life, we can study the nature of the dissimilation which is always going on, though in a nearly latent way, when the animal is in good health. But if in the living animal oxygen and the circulation cease to cause these anaërobic fermentive products to disappear, pathological conditions sometimes allow us to appreciate their effects and bearing even during life. Thus we may see the glucose not oxygenated or transformed, the leucomaines toxic, the derivatives of alcohol and of the acetones, decomposition products of hæmoglobin and of bilirubin, nitrogen, carbonic acid, &c., appearing in excess in the blood, urine, expired air, and other excretions of the sick. The state of health results from an equilibrium of the anaërobic function, and the aërobic function from which the animal draws heat and energy—its organism is purified, and its strength renewed.

Analysis of the Blood in the Living Organs.—M. A. Henocque has invented an instrument by means of which the amount of hæmoglobin in the blood flowing through any tissue can be estimated with a fair degree of accuracy, without lesion of the surface. It consists of a spectroscope with a revolving disc perforated with apertures, into which have been inserted plates of blue or yellow glass, so graded as to affect the pure spectrum of light reflected from the skin, nail, mucous surface, &c., to a definite degree. For clinical purposes, the yellow glasses are made to correspond to 9, 10, 11, and 12 per cent of oxyhæmoglobin, 8 per cent being seen by direct observation without intervention of a glass plate, and less than 8 per cent being brought to view by the help of blue glass, by means of which 6 or 5 per cent of oxyhæmoglobin may be estimated. In the lowest percentages it is necessary, however, to control the observation by means of the ordinary hæmoglobinometers.

With the help of this instrument he has made a series of observations on the normal and pathological vascularisation of tegumentary surface and of such organs as are open to investigation. For example, the mucous surfaces generally give 1 or 2 per cent more than the cutaneous surfaces, thus affording a means of control experiment, more especially useful in profound anæmia. Thus, a man having 11 per cent of oxyhæmoglobin in the blood under the nail, had 13 per cent on the inner surface of the lip, or in other words, the superficial vascularity of the lip is to the subungual as 13 is to 11, or about one-seventh more hæmoglobin to the lip than to the nail.

Interesting observations might be made with this instrument on circulation, respiration, secretion, &c., as affected by drugs.—(*Archiv. de Physiol. Norm et Patholog.*, January, 1893.)

Elimination of Chlorophyll by the Liver.—M. E. Wertheimer finds (*Archiv. de Physiol. Norm. et Patholog.*, January, 1893) that the green colouring matter of vegetables injected into the blood of an animal as an alkaline phyllocyanate is eliminated in abundance by the bile. It does not pass into the urine except in certain conditions of dosage. It behaves in this respect like bilirubin. The analogy in the mode of elimination of the two pigments must be viewed in connection with their chemical analogies, and is no doubt a consequence of them. Thus, sulphindigotate of soda, a pigment of vegetable origin, but of different chemical constitution, is eliminated to a much greater extent, and for a longer time, by the kidney than by the liver.

The bile of certain animals is yellowish, in others green. Bidder and Schmidt have expressed the opinion that the different shades of yellow belong to the carnivora, of the green to the herbivora. Possibly the green colouration is due in part to the absorption of a small portion of chlorophyll, dissolved in the alkaline intestinal fluid, and eliminated thereafter in the bile. The bile of the ox and sheep is green, even in the absence of cholohæmatin, but does not give the spectrum of chlorophyll.

The difference in the colour of the bile of carnivora and herbivora is usually attributed to the presence of bilirubin in the one, biliverdin in the other, but further research is apparently required on this subject.

The Therapeutic Effects of Subcutaneous Injections of Liquid Extracts of Animal Tissues.—This subject is discussed by MM. Brown-Séquard and d'Arsonval in the *Archiv. de Physiol. Norm. et Patholog.*, January, 1893. The idea gains ground that not only do glands have what may be called an internal secretory function, but that liquid extracts of spleen, kidney, liver, pancreas, bone-marrow, suprarenal capsules, thyroids, and even of muscular and nerve tissues may be injected subcutaneously with marked therapeutic effect. Of all these, however, with the exception perhaps of the extract of thyroid glands, they hold the testicular extract to be most powerful. One reason they advance for this is that in part it represents in germ all the organs with all their properties and powers, and, indeed, one of these investigators has made upon himself trial of simultaneous injection of testicular and ovarian extracts, and even of extracts of the whole embryo, the results of which will be published shortly. They hold that all the tissues of males beyond the age of puberty are largely affected by material formed in the testes. They refer to a communication from M. Dieulafoy to the Société Médicale des Hôpitaux regarding a patient affected with uræmia as a result of Bright's disease, treated with extract of the cortical portion of the kidney with marked amelioration of the symptoms—anuria ceased, coma disappeared, the respiration became normal, and perspiration reappeared. Brown-Séquard also refers to reports received from numerous medical practitioners, as to the power of testicular fluid in preventing tuberculosis, in curing or ameliorating locomotor ataxia, paraplegia, cancer, leprosy, and many forms of nervous disease, a power which he attributes to its dynamogenic or power begetting influence upon the central nervous system, and more especially upon the spinal cord.

The Defibrination of Arterial Blood.—M. A. Dastre has extracted from the arterial blood of animals all its fibrin, and restored the defibrinated blood to the animal operated upon. Only a portion of the total blood could be removed at one operation, and if the ratio of the amount removed were too high, the attempt was followed by the death of the animal either at once or in the course of a few days. As a rule, about one-fifth or one-sixth of the total quantity of blood could be removed at one time. Blood thus defibrinated will not, when drawn from the animal, clot quickly, but the rate of coagulation does not depend exactly, as Hewson supposed, upon the amount of fibrin that may be removed—other causes must be taken into account. The arterial blood of defibrination is incoagulable from the absence of fibrinogen; it has still sufficient fibrin ferment to coagulate fluids containing fibrinogen. The incoagulable blood which circulates in the animal after total defibrination contains about the same quantity of sugar as normal blood. Fibrin slowly reappears in the blood of an animal which has been totally defibrinated, and presents for some time the characters of true globulins.

MATERIA MEDICA AND THERAPEUTICS.

By C. O. HAWTHORNE, M.B., C.M.

Belladonna in Exophthalmic Goitre.—In a paper on "The value of Drugs," Dr. Samuel Wilks quotes from his note book several well-marked cases of Graves' disease cured by the persevering use of belladonna. He has usually employed the drug in the form of extract, giving half a grain three times a day. When specific symptoms manifest themselves the belladonna is suspended for a time and quinine administered. The treatment must be continued for several months. Dr. Wilks further remarks that it may be possible to have cases of this disease without either exophthalmos or goître. He mentions as an illustration the case of a middle-aged lady who, without apparent cause, and in spite of tonics and good diet, had grown very thin. As the pulse was very rapid and the skin perspiring, Dr. Wilks thought of Graves' disease, and prescribed belladonna with most satisfactory results.—(*Practitioner*, January, 1893.)

The Local Treatment of Pneumonia in Children by the Ice-bag.—Dr. D. B. Lees claims for this form of treatment (1) that it reduces temperature; (2) that it diminishes physical signs; (3) that it relieves pain; (4) that it is pleasant to the patient; (5) that when used with reasonable caution it is perfectly safe. To attain the last result it is necessary to secure reliable nursing, and to take the temperature every hour. When the thermometer falls to 100° the ice-bag should be removed; it should be reapplied when the temperature rises to 102°. Dr. Lees also insists upon the utility of warm fomentations to the lower limbs, and of vaso-dilator remedies, such as alcohol in warm water with or without a little nitro-glycerine. He considers that failure of the ice-bag treatment is sometimes due to a too limited use of it, and states that frequently two or even three ice-bags are required. In speaking on the same subject Dr. Goodhart expressed the opinion that this method of treatment is a very valuable one, and might safely be adopted in all but the youngest children. Dr. Ashby also finds, in cases where the fever runs high, the ice-bag kept in contact with the chest by a flannel bandage to be the best local application.—(*British Medical Journal*, 15th April, 1893.)

The Effect on Sucklings of Purgatives administered to the Mother.—By a series of clinical experiments, Dr. Wm. J. Gow has endeavoured to test the widespread impression that purgative medicines administered to the mother often lead to disturbance of the bowels of the sucking infant. The conclusions at which he has arrived are as follows:—(1) Sulphate of magnesium administered to the mother frequently causes looseness in the sucking infant; (2) senna, cascara sagrada, and aloes rarely affect the child's bowels when administered to the mother.—(*Practitioner*, March, 1893.)

Resorcin in Chronic Gastritis.—In a paper read to the New York Medical Society, Dr. W. H. Thomson gives his experience of this method of treatment. He has tried it in a very large number of cases both in hospital and private practice. The results, both in cases of gastric ulceration, and also in cases of pronounced gastritis without definite symptoms of ulceration, were highly satisfactory. Dr. Thomson observed that the medicine as a rule failed in cases of gastric disturbance consecutive to nervous disorder. In cases of megrim he found it had no effect in relieving the attacks themselves, but both he and his patients were strongly of opinion that it had a decided influence in preventing the attacks. Resorcin should always be prescribed in solution in order to avoid its local irritating action. An average dose is 5 grains, given an hour after food, thrice daily.—(*Merck's Bulletin*, January, 1893.)

Nitro-Glycerine in Chronic Bright's Disease.—Dr. Green of the Charing Cross Hospital strongly recommends the combination of nitro-glycerine with digitalis when the indication is to restore the heart and circulation, and thus increase the amount of urine. He has found the addition of nitroglycerine prove successful in cases in which digitalis alone had failed.—(*Clinical Journal*, 29th March, 1893.)

Lemonade as a Vehicle for Chloral.—Dr. G. Holland states that the taste of chloral hydrate is effectively masked by lemonade. He adds to 2 or 3 drachms of the official syrup, 2 ounces of water, and then about 2 ounces of gaseous (bottled) lemonade. The draught may be drunk at leisure, and the action of the drug is in no way impaired.—(*Practitioner*, February, 1893.)

Bromoform in Whooping-Cough.—Dr. F. W. Burton-Fanning has obtained good results from the use of bromoform in cases of whooping-cough. In a series of thirty cases he notes that on the second day of treatment the number of paroxysms was distinctly reduced, the attacks were less severe, and expectoration became more easy. Vomiting also ceased and bronchitis gradually disappeared. He does not claim that the remedy materially shortens the paroxysmal stage of the disease, but he considers that it has a specific influence on the paroxysmal cough, and so lessens very considerably the discomfort of the patient, and obviates some of the dangerous features of the disease. The doses employed are as follows:—Half a minim, under 1 year; one minim, up to 3 years; two minims, up to six years. The medicine is given three times a day, and the dose may be gradually increased until it is doubled. It is prescribed in the following form:—Bromoform, 1 minim; compound tragacanth powder, ½ drachm; syrup, ½ drachm; water, ½ ounce. The mixture must be thoroughly shaken before the administration of each dose, and as the drug tends to decompose it is advisable not to prescribe at any one time more than a week's supply of the medicine. Several cases have been reported in which drowsiness, and symptoms resembling intoxication, have followed the use of bromoform which had undergone decomposition.—(*Practitioner*, February, 1893.)

Antipyrin in Epistaxis.—A pledget of cotton saturated with a concentrated solution of antipyrin, and introduced into the nostril, is recommended by Dr. E. G. West, of Boston, as a prompt remedy for epistaxis. He has tried it in a number of cases with unvarying success. It has the further advantage of not producing the disagreeable tarry clots which follow the application of solutions of iron salts.—(*Merck's Bulletin*, November, 1892.)

Glycerine in the Treatment of Nephrolithiasis.—The fact that glycerine dissolves uric acid, and that when taken by the mouth a portion of it passes unchanged through the kidneys, has led Dr. Hermann, of Carlsbad, to try the effect of large doses in cases of renal calculus. The dose was from 2 to 4 fluid ounces with an equal quantity of water, and was given two or three times daily. A few hours after administration lumbar pains of a shooting or boring character were complained of, and this was followed in 10 out of the 14 cases by the passage of gravel, calculi, mucus, pus, and even blood. It was observed that in subjects, free from any suspicion of renal calculus, glycerine produced no pain, and in cases where there was evidence that only one kidney was involved, the pain was only present on the affected side.—(*The Medical Week*, 16th December, 1892.)

DISEASES OF THE EAR.

BY DR. WALKER DOWNIE.

Observations on the Functional Examination of the Normal Ear. By Dr. F. Siebenmann.—The experiments here detailed were made with the object of verifying the investigations of Schwabach and others on the subject of exaggeration of bone-conduction in certain forms of middle-ear affections, and of its diminution in labyrinthine disease. Siebenmann, in his experiments, used forks of varying pitch, and in each case he determined the upper tone limit, and also the variations caused by changes in the intra-tympanic pressure.

The technique of the various experiments must be studied to rightly understand the bearings of the results arrived at, but among the facts proved may be noted (1) that the healthy ear in youth possesses a hearing distance of from 25 to 26 metres for whispered numbers, and of at least 15 metres for the Politzer acoumeter; (2) that the upper tone limit varies little where the hearing is normal; and (3) that Valsalvan inflation diminishes air-conduction for the low-toned fork, and usually increases bone-conduction. Also, and this is a new observation, that under the influence of Valsalvan inflation the upper tone-limit is usually raised, and frequently the perception of the highest note of the scale is rendered more acute.—(*Archives of Otology*, January, 1893.)

A Case of Unilateral Total Absence of the Labyrinth Caused by Scarlatinous Otitis Intima. By Holger Mygind, M.D., Copenhagen.—The patient, who was 9 years of age, was of healthy parents, and until 3½ years old, when he had a severe attack of scarlet fever, had enjoyed good health and normal hearing. During this illness both ears discharged. On recovering, he was found to be dull in hearing, and by degrees it was concluded that the left ear was totally deaf. Discharge continued for years, the boy's health began to suffer, mastoid inflammation supervened, then cerebral symptoms appeared, first as convulsions, then as a comatose state which ended in death. The parts were carefully examined *post-mortem*, and a detailed account is given in the paper. The most important part is that relating to the left labyrinth. There no trace whatever of the normal cavities of the labyrinth was found, the whole internal ear and its immediate surroundings being replaced by hard sclerotic bone tissue, in which not even the outlines of the labyrinth could be distinguished. The aquæductus cochleæ was entirely missing, its external aperture being only visible on the inferior face of the petrous bone. The internal auditory meatus appeared normal, but there were no foramina cribrosa; the terminal branches of the nerves were adhering to the solid bone which had replaced the foramina. The interesting remarks which follow the description of the parts deal with other reported cases, with which the author's case is compared. An important point illustrated by this case is that inflammatory processes of the internal ear developed after birth can result in the formation of bony tissue, which can to a more or less degree replace the normal cavities of the labyrinth. Here the normal cavities were so completely filled that every trace of the outlines of the original cavities had entirely disappeared, and the bone had become solid throughout.—(*Archives of Otology*, January, 1893.)

Five Cases of Otitic Brain Abscess. By Dr. Heiman, Warsaw.—This is a lengthy and interesting paper translated by Dr. W. A. Holden. In the five cases the diagnosis was made at an early stage in three, and in two after rupture had occurred. Amongst symptoms there were in each case some peculiarities which were absent in part or altogether in the others—for instance, in two cases there was no rise in temperature, and in two there was no headache. In four cases the abscess was single, in one case there were two abscesses; three were complicated with thrombo-phlebitis. Extra-dural collections of pus were found in two cases. All the abscesses were encapsuled and their contents offensive. Death was due to rupture of the abscess into the cranial cavity in two cases; into a lateral ventricle in one; it was due to cerebral œdema in one, and to encephalo-meningitis after operation in one.

An autopsy was held in each case, and the condition of the parts is given in detail.—(*Archives of Otology*, January, 1893.)

Memoranda.—In the *Journal of Otology* for January, 1893, there is an interesting paper by Dr. Clarence J. Blake, Boston, on removal of the stapes, "stapedectomy," in cases of non-suppurative disease of the middle ear. The technique of the operation is described, and two illustrative cases are detailed.

There is also a paper on "an Apparatus of Precision for Inflating and Medicating the Tympanum," by Dr. Thomas Hubbard, Toledo, Ohio. By the apparatus described the air employed for inflating the middle ear is purified by being passed through wash bottles containing glycerine, and this purified air may be warmed and medicated as desired. The pressure of the air employed during inflation can be regulated, thus adding safety to the operation.

"A new method of inflating the tympanum" is described by Dr. P. O. Lowe in *British Medical Journal* for 25th February, 1893. It is conducted in this fashion: the patient is directed to hold the breath at the end of a deep inspiration, and close the lips firmly. The nozzle of the inflating bag is then introduced into one nostril, and retained here with the fore-finger of the left hand, the thumb of which hand compresses the other nostril. Then, by compressing the bag, the tympani are readily inflated. Such a method (the novelty of which is questionable) he recommends as an alternative not only to Politzeration and Valsalvan inflation, but also to catheterisation.

A case of "squamous epithelioma of the external ear" is reported by Dr. W. S. Crawford in *British Medical Journal* for 18th March, 1893. It began as a wart on the upper part of the fossa of the helix, and gradually increased in size until the whole of the external ear except the concha and lobule appeared as a large soft warty growth covered with fœtid pus and small blood clots. The affected auricle was removed, leaving only the deeper part of the concha, the anti-tragus, and the lobule.

Books, Pamphlets, &c., Received.

The Cardinal Symptoms of Urinary Disease, by E. Hurry Fenwick, F.R.C.S. Eng. With 36 Illustrations. London: J. & A. Churchill. 1893.

Public Health and Laboratory Work, by Henry R. Kenwood, M.B., including Methods Employed in Bacteriological Research, by Robert Boyce, M.B. With Illustrations. London: H. K. Lewis. 1893.

Verhandlungen der Berliner Medicinische Gesellschaft. Band XXIII. Berlin: L. Schumacher. 1893.

A Handbook of Ophthalmic Science and Practice, by Henry E. Julier, F.R.C.S. With Illustrations. Second Edition. London: Smith, Elder & Co. 1893.

Atlas of Electric Cystoscopy, by Dr. Emil Burckhardt and E. Hurry Fenwick, F.R.C.S. Eng. With 34 Coloured Plates. London: J. & A. Churchill. 1893.

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ORIGINAL ARTICLES.

A CASE OF MICROCEPHALUS IN WHICH THE OPERATION OF LINEAR CRANIOTOMY (CRANIECTOMY) WAS PERFORMED.*

By JOHN BARLOW, M.D., F.R.C.S.,
Surgeon, Glasgow Royal Infirmary, and Examiner in Surgery in Glasgow University.

THE case which I bring before you to-night is a girl, M. T., aged 2 years and 11 months, who first came under my notice in the Dispensary of the Glasgow Royal Infirmary nine months ago. Her father, an intelligent man, sought advice because the child could not walk or talk, and did not recognise any of the members of the household.

Her condition was noted on three occasions at intervals of a month, and as no improvement occurred, she was admitted into the Infirmary on the 23rd of November.

The histories of the father, aged 29, the mother, aged 26, a sister, aged 5 years, and a brother, aged 7 months, present nothing of interest. There is no history of syphilis. I was told that the mother never noticed the presence of the anterior fontanelle after birth in the girl. The mother thought that something must be wrong with the head of the patient's baby brother because *it* had the open fontanelle. It was noticed that during the first year after birth the child was in a sleepy or drowsy condition.

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* Read at a meeting of the Glasgow Medico-Chirurgical Society, 21st April, 1893.

When the girl was fifteen months old she burnt her fingers three times in the one day by placing her hand upon a hot teapot, but she did not cry much.

She has never shown any interest in, or recognised those about her. The father, who is evidently much attached to the girl, is quite sure that she does not recognise him. The parents naturally contrast the amount of intelligence manifested by the patient with that of her baby brother, who is two years younger, and who knows them quite well, and whose eyes follow a train and animals at rest or in motion.

She always passed her fæces without giving notice, and during the last three months she has on several occasions eaten fæces. When sleeping she cries out sometimes, and when awake she is often sitting up and the body swaying backwards and forwards. She has never had a "proper cry," but when she is restless the parents offer food, which is always taken. No preference for any particular kind of food has been noticed.

On looking at the child, attention is arrested by the small head and relatively large face. The body generally is fat, but flabby. Measurements of the head gave the following results:—

Circumference at 1 inch above orbits in front, and occipital protuberance behind, .	17 inches.
Antero-posterior diameter, ...	6 ,,
Diameter between parietal eminences, . .	4½ ,,
Diameter of skull at points 1 inch behind external angular process of frontal bones,	3¾ ,,

Similar measurements were made of the head of a delicate girl of the same age who was in hospital, and in all there was an increase. There was a difference of 1 inch in what I may call the bi-frontal diameter:—

Circumference, ...	18¾ inches.
Antero-posterior diameter, ...	6½ ,,
Bi-parietal, ...	5 ,,
Bi-frontal, ...	4¾ ,,

The child could not walk, and could not stand erect without support. All the special sensations were blunted, and this was especially marked in the cases of sight and hearing.

The reflexes—patellar, plantar, and pupillary—were apparently normal. The skin of the limbs, and especially of the legs, was cold relatively to that of the uncovered head, and was of a dull red colour.

The girl was watched in hospital for four weeks, and during this time confirmation was obtained of the points to which I have referred.

On 21st December the operation of linear craniotomy was performed, with the assistance of Dr. Pringle. Chloroform having been administered, I made a curved incision 6 inches in length—the highest point of the convexity being near the median line—through the scalp upon the left side of the head. This incision extended to the pericranium. The flap thus marked out was raised from the skull. Two small arteries having been secured, a half-inch disc of bone was removed by means of the trephine at a point 1¼ inch from the middle line, corresponding to the centre of the skin incision (about midway between anterior and posterior borders of the parietal bone). Into the hole thus made I introduced Keen's bone-cutting forceps, and by them I removed a strip of bone a third of an inch in width, and extending from the trephine opening anteriorly and posteriorly for fully 2 inches, the portion removed corresponding to the skull from a little in front of the coronal suture to a point 1 inch above and 1 inch to the left of the external occipital protuberance. The pericranium was removed, and sub-dural space was not opened. The flap of the scalp was then put in position, and retained by a few silkworm gut sutures, and the wound dressed in the ordinary way. The operation occupied thirty-five minutes.

The after history is very brief. The wound was dressed upon the 27th, and was found united by first intention. The highest temperature registered was 99·2° F., and there was little or no shock. On the 2nd January she was removed to her home at Coatbridge, arrangements being made for her return in three weeks.

The only change noticed since the operation was the increase in the temperature of the legs, and, on one occasion, the exercise of choice by the girl in the matter of food—she pushed away a cup of milk, but seized and ate a biscuit.

On the 18th January I heard that the girl was keeping well, and that some improvement could be noticed in her mental condition, but she could not be brought to hospital, as her sister had measles, and she herself was sickening. On the 6th February her father wrote me that she was better of the measles, but was very weak, and took almost no food. He says, "I am very sorry she has come home to get this backset, for I think she was getting on well before she took the measles."

On the 7th February I went out to Coatbridge, and found the girl in the languid condition common after measles, and heard that during the previous night she had got out of her crib, and had aroused the father by going to his bed and putting her arms around him.

On the 30th March I heard that the girl had recovered from her illness, and arrangements were made for her return to hospital, so that her condition could be noted.

Present Condition (four months after operation).—In certain respects there is evident improvement. She can now walk without support, but with some uncertainty. The sensation of hearing is more acute, and she takes more notice of her surroundings. She cannot talk, but she can indicate by sound that she wants food. It is less difficult to prevent soiling of bed linen by her excreta. She recognises certain people, and will sometimes hold out her hand to me when I go near her bed. She still occasionally, when sitting in bed, sways the body backwards and forwards, but these rhythmic movements are not observed so frequently. She is quieter, and much more easily managed.

The bi-frontal diameter is now 4⅛ inches instead of 3¾—an increase of ⅜ths of an inch.

It is not my intention to deal to-night with the question of the relationship of the defective development of the brain to the early obliteration of fontanelles and of the sutures. There are those who, like Broca, regard the arrested developments and growth of the brain as the primary lesion, and the changes in the cranial bones as secondary; and others, as Virchow and Russell Reynolds, are of opinion that, owing to some defective nutrition, there is a premature obliteration of the cranial sutures, and, as a result of this, interference with the growth of the brain.

If the former be correct, such an operation as I have described would be justifiable only to relieve pressure symptoms, such as perhaps the rhythmic involuntary movements of body or a portion of the body. If the latter—considering the life history of microcephalics, even when living under special conditions, as in institutions, where we have living beings whom it is necessary to feed and clothe, who cannot speak, and who are simply restless or unquiet if their appetites are not satisfied, and who thus live on unchanged—the operation of linear craniotomy might be performed with the object of lessening the pressure on the brain, giving the brain, as has been said, "elbow room," and allowing of its growth and development.

Up to the present time the operation—or some operation by which portions of the cranial bones have been removed or divided—has been performed 38 times, with 4 deaths. In two, death occurred within three hours after the operation, probably from shock; and in one, death occurred on the third day after operation with hyperpyrexia. It is yet too soon to speak positively as to the results of the operation in those who recovered. By the operation there is lessened one obstacle to brain development, and education, systematic and thorough, is necessary to bring about the slow development of mental power.

In the case which I now show you, no obvious increase, except in the bi-frontal diameter, has occurred in the diameters of the skull. Such increase could not occur from removal of a strip from one side. It is my intention, however, at an early date, to remove a strip from the right side of the skull, and to connect the two furrows by removing a strip extending across the middle line from one to the other. There will then be a means of expansion laterally and from before backwards. It was my intention to do this second operation at the end of last January, but the illness from measles has caused delay. I hope to have an opportunity of showing you the girl at some future meeting.

[*6th May, 1893.*—The second operation was performed on 25th April, the wound was dressed five days later and was completely healed, and the child was sent home to-day.]

TWO CASES OF OPTIC NEURITIS OF INTRACRANIAL ORIGIN.*

By T. SPENCE MEIGHAN, M.D.,
Surgeon, Glasgow Eye Infirmary; Lecturer on Ophthalmic Surgery,
Anderson's College Medical School.

THESE cases illustrate the fact that optic neuritis arising from intracranial disease may run not only its early, but its entire course without obvious affection of vision. This fact, important both as regards diagnosis and treatment, was sufficiently emphasised in the discussion ten years ago on the subject

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* Shown at a meeting of the Glasgow Pathological and Clinical Society, 13th February, 1893.

(*Ophthalmological Society's Transactions*, vol. i, p. 73), and is now, I presume, well recognised by ophthalmic surgeons and physicians. There is not, however, the same unanimity regarding the inferences to be drawn from recovery. Does the neuritis arising from intracranial tumour go on to atrophy with more or less visual defect? Must a transitory recovering neuritis be explained, not by a tumour, but by a meningitis arising apart from tumour? From the nature of the case we can rarely have *post-mortem* evidence on the latter head, but the history of both of the present cases bears on this point, more especially that of the younger patient. The patient, when he first came under observation, presented the usual symptoms of an intracranial growth, and I considered myself justified in diagnosing his case as such. He has had two previous attacks, from which he apparently recovered under treatment, although I do not think the recovery was complete. I still believe that my first diagnosis was correct, and there is the possibility, if not probability, of further developments in the case.

Case I.—W. M., aged 45 years, clerk, first came under my care in the Eye Infirmary in November, 1892. He complained of dimness of vision, which he first noticed about three months before, and also stated that on looking at an object he could not see it distinctly for a few seconds. Two years before he had suffered from headache, and occasionally from giddiness; these symptoms had continued, and had been worse at certain times than at others. Twelve years ago he had what he called "erysipelas"—an eruption on the skin and head, which lasted three months (probably a syphilitic rash). He has also suffered from slight convulsive fits for ten or twelve years, and from his wife I learned that he has had about two or three of these fits in a year. Since he came under treatment he felt giddy, staggered and fell on two occasions on his way to the Infirmary. About the middle of December last he gradually got worse, and was confined to bed, and became unconscious, and remained so for two days; during this attack he partially lost the power of his left side, but it has since gradually improved, although the leg still feels stiff and the joints sore. On awakening in the morning he feels a severe pain in the back of his head which extends to the frontal region. Under treatment the partial paralysis and his sight have improved, but he feels his memory defective, and does not remember the names of things he knows very well. His speech is slow and uncertain. There are no tremors of the lips or tongue. His hearing was always good, but since the attack of unconsciousness it has become dull, more especially on the right side.

H. D. of R. ear, 3 inches.
H. D. of L. ear, 10 inches.

The knee-jerk of the left leg is more active than that of the right; there is no definite paralysis, but the grasp of the left hand is weaker than that of the right, and he also complains of slight numbness in the left hand, otherwise his sensation is fairly good.

Head.—Nothing is made out by auscultation. On percussion he complains of some pain toward the back of his head, but little difference can be discerned in the character of the note on the two sides.

Eyes.—There is no obvious oculo-motor paralysis, and convergence is well performed; the pupils are moderate in size, equal, and react to light and accommodation.

V.R. with + 4 = $\frac{20}{40}$: 8 J.
V.L. with + 4 = $\frac{20}{30}$: 8 J.

Ophthalmoscopic Examination—Right Eye.—Media clear; well marked optic neuritis; summit of disc seen with + 10 D, and this, by allowing + 4 D for the hypermetropic refraction of the eye, would give a swelling of the disc equalling 2 mm. from the level of the choroid. The optic disc is engorged and striated with some white spots of exudation towards its margin; there are also a few slight hæmorrhages in the vicinity of the disc. Veins dilated and tortuous; arteries reduced in size, and towards the centre of the disc the vessels are sometimes lost to view.

Left Eye.—Media clear; edge of disc blurred; otherwise the appearances showed the same changes as in the right eye.

Field of Vision.—A perimeter tracing was taken for each eye, and showed a contraction of the peripheral field, with limitation of the field for green; both eyes were equally affected.

Case II.—J. P., aged 23 years, clerk, came to the Eye Infirmary in January last complaining of slight dimness of vision, some difficulty in distinguishing colours, and general weakness. On looking at an object, at first a glimmering light appears before him as though the sun were in his eyes, but in a few seconds this disappears, and the object comes into view. He dates his illness from eight months prior to admission. Before that time he had always enjoyed fair health. The first symptoms were severe pains in the forehead, extending over the vertex to the back of the head. The headaches were worse during the night time, and generally towards morning he felt very sick, and vomited. This condition lasted for three or four weeks, and after one of the severe attacks of vomiting he first noticed that his eyesight was affected. He gradually got so bad with the pain in his head, giddiness and weakness, that he had to remain in bed. At this time he was supposed by his medical attendant to be suffering from inflammation of the brain, and was treated by iced applications to his head and internal remedies, but he became unconscious, and remained so for fully three weeks. After this he gradually improved and consciousness returned. He still, however, felt the pain in his head, but it was not quite so bad as previously; he also felt stronger and his sight much improved. Altogether, he thought he was getting better, and was advised to go to the country for a few weeks. For three months he considered himself quite well, and was able to attend to his regular employment. After this the pain in his head and the vomiting returned, and his eyesight became affected as in the previous attack. He occasionally felt giddy and staggered, and was so bad two weeks before admission that he had to take hold of a railing on the roadside or he would have fallen. A week before admission he had a convulsive fit, and fell unconscious on the office floor. There is a history of venereal disease of doubtful character. Tendon reflex at knee subnormal; hearing dull on the left side; other sensations normal.

Head.—He complains of pain over the left parietal region on percussion, but nothing can be made out with the stethoscope.

Eyes.—All the ocular movements, including convergence, are well performed; both pupils fairly active to light.

V.R. $\frac{6}{12}$ and No. 1 J.
V.L. $\frac{6}{12}$ and No. 1 J.

Field of Vision.—A perimeter tracing was taken for each eye, and showed a general contraction of the peripheral field, and a contraction of the field for green and red.

Ophthalmoscopic Examination—Right Eye.—Media clear; intense optic neuritis; veins considerably congested; arteries narrowed; and there are one or two hæmorrhages in the vicinity of the disc. Refraction emmetropic; summit of disc seen with + 4·5 D; swelling of disc equals 1·5 mm.

Left Eye—Media clear; edge of disc blurred; other changes same as in right eye.

The two cases here recorded present the typical appearances of optic neuritis, but it will be readily understood that the ophthalmoscopic appearances of inflammation of the optic nerve vary a good deal with the intensity of the process.

The condition of congestion with œdema is recognised as the first stage of optic neuritis, and presents an increased redness and swelling, with blurring of the edge of the disc, the opacity being due to a radiating striation of the nerve fibres as they spread out on to the retina. The changes are strictly an œdema, with increased vascularity. When changes take place, indicating that a process of inflammation in the nerve fibres and connective tissue has begun, the condition is then said to have entered on its second stage. This condition is characterised by exudations and degeneration of nerve structure similar to those due to inflammatory action in other parts. The appearance of the disc is now of a reddish grey tint; the swelling increases; the radiating striation becomes more pronounced and redder in colour—a condition which is evidently due to swelling and opacity of the nerve fibres and vascular changes. The centre of the disc may be deeper coloured than the peripheral portion, and of a stippled appearance, instead of being striated, while the striated edge shades off into the tint of the adjacent fundus. In the acute forms of neuritis the change usually affects the whole of the disc, and only exceptionally affects the nasal side more than the temporal side of the disc. White lines and spots are sometimes seen; hæmorrhages, too, are not uncommon in this stage, and may appear at different parts on the surface of the swelling.

As regards the vessels, there is not much change to be noted in the arteries during the first stage of the disease, beyond being more or less concealed at their emergence from the disc. The veins are more affected; they are darker in colour, with no central reflection, and are more or less dilated and tortuous. As the neuritis progresses, the swelling often increases to such an extent that there is a difficulty in seeing its surface; but the degree of prominence of the swollen papilla can be appreciated by observing the difference in the strength of the convex lens, which is necessary to focus accurately the surface of the disc and the surrounding retina, and allowing roughly 3 D for every mm. of height. The vessels are often lost to view at the centre of the swelling; the arteries are narrowed and usually more concealed than the veins; the veins appear darker, and usually present some enlargement from dilatation, and may be partly concealed by exudation.

In severe cases the neighbouring parts of the retina may be also swollen. The arteries now are small, and usually invisible from being imbedded in the substance of the exudation. The veins, too, are more or less concealed on the disc, but are usually visible towards its edge, and are much distended. In such cases, numerous hæmorrhages may be found scattered over the fundus.

In referring the above cases of neuritis to cerebral mischief, I was led to this conclusion, in the first instance, by the ophthalmoscopic character of the neuritis. A high degree of neuritis, such as that of the present cases, is seldom met with except in cases of cerebral tumour, although we cannot conclude from this alone, for it is well known that optic neuritis due to a general disease may be accompanied by symptoms suggestive of cerebral disturbance. Cases, also, have been recorded of optic neuritis due to a cerebral tumour, accompanied by few other signs of intracranial disease. In most cases optic neuritis is accompanied by headache, and often by vomiting. Sometimes the headache precedes the neuritis, and very often, indeed, it precedes the failure of vision. The three symptoms—optic neuritis, headache, and vomiting—depend in many cases on gross lesion within the cranium, but they do not help us to determine its exact situation.

In these two cases there is an absence of localising symptoms, except perhaps in the older patient, who has the partial paralysis of the left side, and who also suffers from occasional convulsive seizures. The probability is that he is the subject of gummata, or of a syphilitic meningitis. In the younger patient I can only at present, from the history and appearances, refer his symptoms to a syphilitic origin.

A NOTE ON THE TREATMENT OF ACUTE ABSCESS.

BY J. AIKMAN, M.D., GUERNSEY.

MR. ARTHUR BARKER'S suggestion on the treatment of chronic abscess by scraping, flushing, and immediate suture (*British Medical Journal*, vol. i, 1891, page 275) opened a new era in the treatment of that disease. His observations have been confirmed, and the procedure described is, without doubt, the best at our disposal.

The extension of a similar treatment to cases of acute abscess has not, so far as I am aware, been suggested.

In chronic abscess we interfere at a stage at which nature has already made some advances along the line of cure. The zone of infiltration is firm and limited in thickness, and the tissues which not very distantly surround the abscess cavity are comparatively free from disease-producing germs.

In acute abscess the pyogenic membrane consists of less firm granulations, the surrounding tissues are more inflamed, infiltrated, brawny, and sodden, while the skin itself is in a state of inflammatory congestion, which is not favourable to primary union.

But it occurred to me that similar conditions not infrequently exist in flaps after amputation which unite by first intention. It seemed not unreasonable to suppose that, if the condition after amputation could be imitated, primary union might be obtained even in cases of acute abscess. Keeping this principle in view, I made my first essay upon a very large breast which had suppurated during lactation, apparently from a neglected fissure of the nipple. There was very high fever, enormous boggy swelling, and marked redness, but no positive sign of fluctuation. To wait seemed to insure a protracted recovery with probably multiple abscess. To interfere could at worst mean a renewed opening of the stitches and draining the wound in the ordinary way. I therefore made a large incision through nearly the whole depth of the breast, which at its apex reached an abscess cavity about the size of a walnut. To this I applied Sir Joseph Lister's modification of Mr. Barker's flushing scoop, using boiled water with 1 in 10,000 of perchloride of mercury, and scraped away as much of the brittle material as possible. I then put in deep stitches to surround and compress the remains of the abscess cavity, and superficial stitches to close the wound in the skin. A surface dressing of mercuro-zinc-cyanide gauze was used.

No pain followed the procedure, and the temperature fell at once. The dressing was drenched with serous fluid, and was changed on the second, and again on third day. The fourth dressing remained till the wound healed without a sign of pus.

After some less serious and experimental cases, I applied the same treatment to a poisoned abscess of the back of the fore-arm. Matter had formed in two places—one near the elbow, another among the tendons at the wrist. The two sacs communicated. Aspiration was tried, and about one ounce of pus obtained, but the morbid process was not checked. The fluid returned, and the tissues were angry, sodden, and swollen. Under ether I made an incision eight inches long, and evacuated the pus. I then applied the scoop dry, and scraped away all the brittle material and dead fascia. The resulting wound was a clean dissection of the muscles and tendons from the elbow to the wrist, in which a considerable portion of the bellies of the muscles was removed. The wound was swabbed with 5 per cent phenol solution, and closed completely with deep and superficial stitches. At one point the skin was very thin and dusky, but it was left. There has since been a little breaking down of the scar at this point. No pain followed the operation, but the earlier dressings were drenched with serum. Four changes of dressing were used, but primary union took place without a sign of suppuration.

Summary.

The free incision is needful, not for the drainage of a cavity, but for the drainage of inflamed tissues infiltrated with serum.

The more frequent change of dressings, at least in the early stage, is probably needful to preserve asepsis.

The flushing during the scraping process is probably not required in view of the free incision and fuller access to all parts of the wound for later antiseptic measures.

The scraped surfaces may be approximated closely, because the deeper parts are less infiltrated than the superficial structures, and require less drainage.

Silver sutures are preferable in view of the soaking of the earlier dressings by serous discharge. I have always drawn them tight, and found that they loosened sufficiently where the tissues had drained a little. I have always made considerable pressure on the dressings by means of a firm bandage.

I commend these suggestions from a limited experience in private practice to those who have larger opportunities, in the belief that they will tend to shorten convalescence in suitable cases.

A NOTE ON THE TREATMENT OF THE CANCEROUS INFILTRATION OF THE CANCELLATED STRUCTURE OF BONE.

BY J. AIKMAN, M.D., GUERNSEY.

THERE is one form of the recurrence of breast cancer which affects first of all the sternum in its upper part, and later the upper end of the humerus, or the bodies of the vertebræ. I know no form of recurrence which is more painful or more hopeless. It sometimes follows operation, sometimes precedes and precludes it, and certainly has no relation to an open sore. In my experience it is most common with scirrhus.

In one case the salicylate of soda in 10 grain doses three times a day gave more relief than any form of opiate, and completely quelled the agonising pains.

I regret to say that I have found the drug quite useless in any other form of pain which attends cancer. I have not had the opportunity of trying it in osteo-sarcoma.

THE TREATMENT OF ENDOMETRITIS.*

BY ROBERT POLLOK, M.B., C.M., F.F.P.S. G.

THE increasing frequency with which we meet with endometritis in our work justifies, I think, my endeavour to bring the subject before this Society in order that we may have an opportunity of mutually discussing and considering the disease.

I am quite certain you will excuse me from attempting fully to discuss the wide and varied etiology of this affection; but it may assist in the elucidation of the treatment if I, as briefly as possible, run over a few of the more important factors in its production.

The most frequent of all causes is, I believe, the specific affection, gonorrhœa. These chronic discharges which we find so frequently from the vagina and uterus are as detrimental to the tissues of the uterus and its adnexæ (such as the tubes and ovaries), and require as much care and treatment for their removal as do discharges from the conjunctival, the aural, nasal, or other mucous membrane. A lowered or vitiated condition of the general health will cause an ordinary catarrh to assume a persistent endometritis. In such conditions the frequent passing of a sound, multiple, or careless non-antiseptic digital examination will also provoke similar consequences; and, if this be true of catarrh and examination, it is doubly so in any form of infectious disease. In ruptured perinæum or prolapse of the vaginal wall, where the vulvæ are in a gaping condition, in lacerated or ectropic conditions of the os, pathogenic agents will find easy access, and more readily flourish.

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* Abstract of paper read before the Glasgow Southern Medical Society.

The products of decomposition arising from the putrefactive changes in retained portions of the membranes explain the dangers and frequency of endometritis after miscarriages. In cases also of protracted labour where, from debility and loss of muscular tone, involution has not thoroughly been completed before the patient gets about, or in instrumental parturition where lacerations have taken place, endometritis will be apt to supervene. The same may happen after menstruation if the patient has been exposed to a chill.

When we consider the free anastomosis of the uterine nerves with the sympathetic and spinal nervous systems, we are not surprised at the symptoms which assert themselves in such an affection of the uterus, such as the distended tympanitic abdomen, the flatulent dyspepsia, the gastric and pulmonary disturbances, the flushings and cardiac palpitations —in short, every organ which receives its nerve supply from the vagus has its functions interfered with. However, these subjective symptoms are common to many other diseases, and are not to be absolutely relied upon unless in conjunction with the objective local signs pathognomonic of the mischief. On bimanual palpation we find increased bulk of the uterus; we also find, on digital examination, the same condition of the cervix; by speculum we see a raw red condition of the os, from which may exude a reddish or purulent discharge, whilst by the sound we may discover a displaced or subinvoluted uterus. If the disease has existed for some time, we may also have considerable pain and distension, and thickening of the tubes and surrounding tissues. It is very rare to have a persistent inflamed condition of the endometrium without a certain amount of salpingitis and oöphoritis as well.

There may be menorrhagia or metrorrhagia and leucorrhœa with membranous dysmenorrhœa. I have been often struck with the similarity of symptoms present in acute eczematous conditions and those complained of in acute endometritis, the same constitutional irritability, gastric and pulmonary disturbances, and the gelatinous fluid exuding from the os, corresponding to some extent with the starchy exudation of an eczematous eruption.

It is of the utmost importance to begin the treatment at as early a stage as possible, for if once the disease has obtained a firm footing on the mucous membrane and parenchyma of the uterus it is difficult to dislodge, and it easily spreads and affects neighbouring organs. But whilst I advocate early and thorough interference, I by no means support strong or heroic measures. On the contrary, I am convinced that the constant or even intermittent applications of strong caustic preparations to the interior of the uterus is as productive of evil to adjacent structures as is the use of strong urethral injections provocative of epididymitis and angeioleucitis in the opposite sex. We are very apt to think if once the raw, eroded surface (some call it ulceration) visible to the eye is removed we have cured the mischief, but it is impossible to have an inflamed mucous membrane without the body of the uterus being to some extent implicated, and it is not by the use of caustics and local applications that we can remove the accompanying metritis.

A couple of weeks in bed with hot antiseptic douching, both of the interior of the uterus and the distended vaginal walls, is productive of the happiest results. I use boric acid or boroglyceride in the proportion of 1 to 20 of hot water, or more frequently a solution of mercuric bichloride, 1 in 3,000, or a weak iodised solution. In applying these or any other solution to the interior of the uterus, it is imperative that the os be potent and a double channelled canula used. Frequently I have seen cases of acute metritis following uterine injections when their return has been impeded by a closed os.

For the same reason I strongly disapprove of the application of liquids by means of intra-uterine syringes.

These douchings, along with hot sitz baths and the application of glycerine tampons, often reduce very rapidly an enlarged and inflamed uterus to normal dimensions and conditions. A strong solution of iodine may be painted freely over as much of the cervix and uterus as can be reached, and an iodoform or boric acid bougie applied to the interior of the uterus after the surplus fluid from the douche has been thoroughly mopped with absorbent cotton. A great many of our acute endometritic cases will, in the course of two to four weeks, yield to this treatment whether their origin has been specific, inflammatory, or traumatic, and the subsequent constitutional treatment, with careful advice as to exercise, diet, bandaging, clothing, with due attention to regularity of the bowels, will thoroughly re-establish the debilitated constitution. We may most pleasantly recommend these therapeutic medicinal and dietetic agents in the form of a change to one or other of our reputed spas, selecting the chalybeate, the alkaline, or saline, according to the constitutional requirements. I am well aware that local depletion either by leeches or scarification has been recommended, but I have never had cause to resort to such measures. I am also very chary of applying strong caustics to the interior of the uterus, measures which, as you know, come under the designation of intra-uterine medication. I cannot bring myself to believe in the practice which extensively prevails of bringing patients frequently to dispensary or consulting room for the purpose of swabbing, or brushing, or cauterising the uterus; the poor creatures would derive infinitely more benefit by resting in bed the time they are sitting shivering in a waiting room, not to speak of the shock and rigor which is produced by strong intra-uterine applications. Is it not reasonable to suppose that salpingitis, oöphoritis, and even subacute peritonitis, may be often so induced?

What I wish to strongly advocate is rest, warmth, proper diet, and the therapeutic measures as above indicated; if, notwithstanding these, the leucorrhœa and engorgement of the uterus continues, instead of long continued cauterisation, we should resort to curettage at a comparatively early stage. The curette accomplishes at one sitting what caustics would not in weeks, and it assures the patient the rest which is so necessary, with the additional advantage of thorough local depletion which is so salutary in those cases of endometritis accompanied with severe hæmorrhage. During the operation a warm antiseptic solution should play on the parts; this not only renders the operation antiseptic and safe, but also encourages the local depletion.

Mucous polypi ulcerations or erosions of the cervix and small cysts are far more efficiently removed by the curette than by any other measure.

Ruptured perinæum, prolapsed vaginal walls, and ectropic conditions of the cervix render the advent of endometritis easy, so it will readily be inferred that when the inflamed condition of the mucous membrane is subdued, these local defects must be rectified.

To discuss the different methods of operating in such cases would carry us far beyond the limits of this paper.

Every operator will naturally select his own favourite method, whether that be Lawson Tait's perinæorraphy, Martin's colporraphy, or Emmet's trachelorraphy, or perhaps personal modifications of either of them.

Unless in extreme cases, strict attention to cleanliness will obviate the necessity for any operative interference whatever.

ON THE CLIMATE OF SOUTH CALIFORNIA AND ITS SUITABILITY AS A HEALTH RESORT.

By THOMAS DAVIDSON, M.D. (Glasgow),
Los Angeles, California.

Of late years much has been written on climate, and the various places claiming the attention of the profession as winter resorts become each year more numerous. All claim superiority on account of some peculiarity in surroundings, &c., and, unfortunately, the profession is swayed by fancy. It is only too well known that many reports emanate from the pens of men who are interested in "booming" a section of country to enable them to realise on land speculations in which they are either directly or indirectly interested. And when the medical man, thousands of miles away, reads of a glorious country, endless sunshine, and unprecedentedly productive soil, he is apt to believe that California is a veritable Land of Beulah.

A residence of three and a half years in the city of Los Angeles has enabled me to visit many of the more popular health resorts in Southern California; this, combined with facts gathered from clinical work, as well as letters of enquiry from medical friends and others, is my apology for placing the following data before the profession:—

The question of leaving Great Britain in the month of October for other and better winter climates is to many a topic of great importance. Constant enquiries are being made as to the suitability of this section of country for delicate people, and those either predisposed to, or the subjects of tuberculous disease. Where shall I go, is the question asked, and the answer most frequently given is, Go to California, Australia, or South Africa, as the case may be. As a rule, but little trouble is taken to ascertain what spot in these wide countries should be selected. Nor do I think it possible for any practitioner of medicine, however well versed in works on climatology, to be able to give any more than an approximate idea of the particular place from which most benefit may be obtained, unless he has personally made himself familiar with the physical aspect, geological structure, and geographical formation of a district.

Through the recent writings of Van Dyke, C. Dudley Warner, and others, Southern California has become more or less familiar to the average reader. The largest centres of population are Los Angeles, San Diego, Santa Barbara, and Riverside. Thousands annually flock during the winter months to these places, to escape the chills and blasts of less favoured localities.

Topography.—The following notice is given by Dr. H. S. Orme in the Board of Trade Reports:—

"The territory, to which this enquiry is restricted, comprises an irregular outline extending almost from latitude 32° 30′ to 35° 40′, and from longitude 37° to 43° 40′. In the direction of the parallels, its extreme width is 330 miles, and its extreme length 230 miles. Its coast line, following the indentations, measures about 330 miles.

"Santa Barbara and San Diego are on the coast, Los Angeles is 17 miles inland, and San Bernardino and Riverside are 60 miles inland.

"The western part of this region is traversed by low ranges of mountains, having an average altitude of from 3,500 feet to 6,000 feet. A few of the higher peaks exceed 7,000 feet in altitude; the culminating peak, Mount San Bernardino, reaches to a height of 11,800 feet above sea level. These mountain ranges enclose a number of small but fertile valleys, many of which are settled. The eastern portion consists of an arid and tolerably level tract, usually called the Mojave Desert. A smaller portion of this, in the extreme southern part of the State, is known as the Colorado Desert. It is separated from the former by a few isolated ridges, which form the southern remnant of the San Bernardino Mountains. The western part of this arid region has an altitude of 2,000 feet; the central and eastern parts are much lower, and in several places are below sea level. But, by far the most important part of Southern California is the western slope of the coast range of mountains, which, from a narrow strip in the north, widens to a broad plain in the south."

Outside San Diego and Los Angeles few meteorological observations have been made, save in Riverside and Santa

Barbara. Consequently, in a new country like this, material is scanty. The subjoined data are copied from the Signal Service Reports as they appeared in the transactions of the Californian State Agricultural Society.

Dryness.—It is unfortunate that the tables relating to humidity refer only to the cities on or near the coast. As the march inland takes place, the saline-impregnated air from the Pacific Ocean becomes diluted, and eventually moisture from that quarter is entirely lost sight of. Here, also, the elevation of the land is greater, while the porous nature of the soil renders it free from any subsoil moisture. Hence, observations carefully conducted in the inland cities and country would show a much lower percentage of saturation, a much smaller rainfall, and a lesser degree of equability of temperature.

LOS ANGELES (Altitude, 270 feet).

Mean relative humidity from 1878 to 1890.

Average mean of thirteen years, 69 per cent saturation.

Average mean for each month of the year.

January, .	66 per cent.	July, . .	72 per cent.
February, .	69 „	August, .	72 „
March, .	73 „	September, .	72 „
April, .	74 „	October, .	69 „
May, . .	72 „	November, .	62 „
June, . .	72 „	December, .	68 „

SAN DIEGO (sea level).

Mean relative humidity from 1880 to 1890.

Average mean of eleven years, 74·7 per cent saturation.

Average mean for each month of the year for eleven years.

January, .	70·7 per cent.	July, .	77·6 per cent.
February,	71·7 „	August, .	77·9 „
March, .	75·7 „	September,	78·3 „
April, .	75·7 „	October, .	76·1 „
May, .	75·2 „	November,	67·4 „
June, .	76·3 „	December,	73·3 „

Santa Barbara (sea level).

Mean relative humidity from 1889 to 1890.

Average mean of two years, . 73 per cent saturation.

Average mean for each month of the year 1890.

January, .	69 per cent.	July, . .	73 per cent.
February, .	66 „	August, .	75 „
March, .	65 „	September, .	79 „
April, .	76 „	October, .	70 „
May, . .	75 „	November, .	53 „
June, . .	72 „	December, .	64 „

The most remarkable fact in connection with the above figures will be at once apparent on looking over the humidity and precipitation—viz., the months which record the greatest rainfall are those in which the humidity is lowest. In explanation of this, Mr. Franklin, of the Signal Corps here, says, that during the wet months the wind blowing from the desert is greatly freed from moisture, and thus the percentage of saturation is lowered; while this may partly explain the lower degree of humidity, yet it can scarcely be accepted as a solution of the problem, for under the heading "Winds," it will be observed that throughout the year the prevailing direction is west.

Precipitation.

Annual Amount (in Inches and Hundredths).

	Los Angeles.	San Diego.	Riverside.	Santa Barbara.
1881, .	5·53	5·00	3·95	...
1882, .	10·74	9·24	5·78	...
1883, .	14·14	8·01	5·54	...
1884, .	40·39	26·95	25·32	...
1885, .	10·69	5·72	5·15	17·15
1886, .	17·22	15·39	8·02	13·86
1887, .	16·07	10·72	7·81	17·09
1888, .	21·04	11·57	15·48	26·26
1889, .	33·31	16·03	20·41	32·84
1890, .	12·49	8·02	11·53	15·44

Rain usually begins to fall in October, and ends in April or May. While this period is called the wet season, it must be clearly understood that it seldom rains more than one.

or two consecutive days until January is reached, when it sometimes continues raining for as many as five days. In the intervals the most excellent weather is enjoyed; the days are clear and bright, while the evenings and nights, although seldom reaching freezing point, are sufficiently cold to make a good fire really enjoyable. On an average Los Angeles will have about 42 days on which an appreciable amount of rain will fall; San Diego, 41 days; Santa Barbara, 21 days (with a rainfall over ·10 inch); and Riverside, 40 days.

The quantity of rain is of much less moment than its duration. Here the soil is chiefly sandy or a rich sandy loam; water quickly disappears, and outdoor life can be resumed as soon as the rain ceases. In many places, however, patches of adobe soil exist, and as that soil retains moisture it soon becomes an adhesive, tenacious mass, through which it is almost impossible to walk. Such places should be carefully avoided in choosing a home.

Sunshine.

YEAR.	LOS ANGELES.			SAN DIEGO.			SANTA BARBARA.			RIVERSIDE.		
	Clear.	Fair.	Cloudy.	Clear.	Fair.	Cloudy.	Clear.	Fair.	Cloudy.	Clear.	Fair.	Cloudy.
1880, .	141	171	54	111	135	120	...	...	...	...	...	...
1881, .	172	154	39	127	166	72	...	...	...	...	...	...
1882, .	197	109	51	195	123	47	...	...	...	...	...	...
1883, .	183	143	39	159	158	45	...	...	...	...	...	...
1884, .	189	110	66	117	182	67	...	...	...	...	...	...
1885, .	181	145	38	156	168	41	...	...	...	...	...	...
1886, .	190	131	43	130	179	56	...	...	...	...	...	...
1887, .	196	129	39	128	173	64	...	...	...	...	...	...
1888, .	184	118	64	152	97	117	...	...	...	...	...	...
1889, .	140	181	44	194	69	75	*231	*57	*77	...	...	...
1890, .	163	155	47	185	83	97	*238	*47	*80	208	105	52

* Observations day time only.

"Fair" days are those which have sunshine throughout the greater portion, but fogs or clouds prevail during the night, or it may be some short period of the day. Indeed, on three hundred days of the year a sun bath may be indulged in, while the other sixty-five days will pass for average weather in less favoured countries. No records are kept to show the number of hours of sunshine for a given period.

Temperature.

Monthly means of temperature (mean reading for each month for eleven years).

	LOS ANGELES.	SAN DIEGO.	SANTA BARBARA.
January, . .	52·5	52·8	52·5
February, . .	54·3	54·3	54·7
March, . .	56·3	56·0	55·9
April, . .	59·0	58·6	58·5
May, . . .	62·2	61·3	59·6
June, . .	66·0	64·4	62·9
July, . .	69·2	67·2	65·9
August, . .	70·2	69·1	67·0
September, .	68·4	67·2	66·6
October, . .	63·1	62·6	62·9
November, .	59·0	58·5	59·4
December, . .	55·7	56·5	55·8

The coldest weather occurs in January, with a gradual rise in each succeeding month until August, when there is a steady fall to the end of the year.

Mean annual temperature for 1890.

	LOS ANGELES.	SAN DIEGO.	SANTA BARBARA.	RIVERSIDE.
Mean maximum and minimum,	63·0°	62·6°	60·2°	63·0°
Mean maximum, . . .	73·8°	70·2°	70·2°	78·5°
Mean minimum, . . .	52·3°	54·9°	54·04°	47·6°

Annual Range.

STATION.	Elevation.	Maximum.	Minimum.	Annual Range.
Los Angeles, ...	275 feet.	105°	34·0°	71·0°
San Diego, ...	Sea level.	104°	41·0°	63·0°
Santa Barbara, ...	Sea level.	98°	33·5°	64·5°
Riverside, ...	1,200 feet.	109°	26·5°	82·5°

Daily Range runs from 5° up to 50°.

With such variation of temperature no claim can be laid to equability. The higher lands, which are seldom visited by fogs, admit of very rapid radiation of heat from the earth's surface, with a correspondingly great range of temperature.

This is well shown under "Annual Range," when comparing Riverside with the other districts under observation. Nor can it well be otherwise, for equability of temperature and dryness of atmosphere, especially with altitude, do not coexist. As a rule, the change from heat to cold or coolness is by no means sudden in its onset. Every day at noon the western sea breeze slowly but surely tempers the heat, making it necessary for the person with an irritable mucous membrane and a sensitive skin to be near a comfortable wrap when the sun begins to decline. The discomfort attending this change is not trying; no matter how warm the day is, the evenings are exhilarating. The nights are always cool, and a good blanket is an absolute necessity.

Winds.—One great feature of this climate is that few days pass in which a steady breeze does not blow from the ocean. This has a decidedly good effect in circulating the air, which from stagnation would otherwise get charged with deleterious matter. These winds are pleasant and bracing. Occasionally, however, as more elevated ground is reached, and the desert is approached, the winds attain considerable velocity, and carry a quantity of sand, which is disagreeable and trying even to a healthy person. On this account, special care is required in the selection of a well-sheltered spot for the susceptible phthisical individual. Many of the new towns have sprung up near the foot of hills, and the most desirable homes are found at the base or up the slope of the mountain.

Prevailing Direction of Winds.

LOS ANGELES.

YEAR.	DIRECTION.	VELOCITY.	
		Average Daily.	Maximum.
1886, . . .	W.	136·4	37
1887, . . .	W.	140·5	37
1888, . . .	W.	122·4	33
1889, . . .	W.	88·0	24
1890, . . .	W.	86·0	30
	SAN DIEGO.		
1889, . . .	N.W.	128·0	27
1890, . . .	S.	111·2	30

Clothing.—A weakly constituted person, or a phthisical individual, in whom there is a marked weakening of the inhibitory action of the nervous system, or collapse of the constitutional powers, must here, as elsewhere, dress in a commonsense manner, and take no chances. Warm flannels, covering the entire body and limbs, should be worn summer and winter. During the months of June, July, August, and September, a light flannel may be worn, but for eight months of the year underclothing of the same weight as that worn in Great Britain is an absolute necessity. Indeed, old residenters here wear the same clothing summer and winter, merely adding an overcoat for the cooler evenings. A great mistake is made in thinking of Southern California as a semi-tropical region.' Doubtless the person who can take the trouble to change the clothing daily, wearing less heavy garments during the day, and substituting heavier woollen ones towards evening, will derive most comfort and succeed best in evading acute catarrhal attacks.

Food and Water.—Food equal to any which can be procured in the Old or New World can be had here. Mutton is of fine flavour and quality; the beef leaves something more to be desired. Possibly the deterioration in quality is caused by the long distances which cattle travel to reach the market.

Fruits and vegetables of all kinds are cheap and plentiful the year round, and when many countries are snow-clad and frost-bound, here, at Christmas, we enjoy our lamb and green peas. Grapes are grown in great abundance, and much care is now exercised in the manufacture of choice wines. The increasing demand for Californian wines in the Eastern States of America and the foreign markets of Europe is evidence of the quality which is being produced.

Generally speaking, the water supply is wholly received from the mountains, and is of very excellent quality. For many years a portion of Los Angeles has had a filthy and inadequate supply, but happily this state of matters will soon cease to exist. A few of the outlying districts are on artesian belts, and water is procured at little expense.

Social Advantages.—In all towns good society can be found, and strangers are welcomed with true Western hospitality. All nationalities are well represented, likewise all classes and conditions of people. A free and easy manner is adopted, and the distinguished scholar and student is well content to earn his bread by the sweat of his brow in the search for health and wealth. Money more than education is the standard by which society gauges the individual. Schools are numerous and well organised.

Employment.—Every kind of business, trade, and profession is fully—perhaps too fully—represented. The person who is doing well at home had better stay there; but if forced to seek a more genial climate, a moderate income will keep one in comfort here. Prices at all boarding houses and sanitaria are reasonable, and the accommodation good. A few hundred pounds will readily procure a small tract of land in a good district, and from the product of less than five acres an industrious family can live in comparative comfort. Clerks, accountants, &c., come here in search of health, and expect to get it in the city sitting at a desk. Appointments are hard to get, and the applicants are many. My advice to all such is, buy a few acres, work them industriously, and not only can a life of independence be maintained, but there will also be the extreme satisfaction of finding the greatest of all wealth—renewed health.

Pastimes.—This country, with its ever changing scenery, has a power to invigorate the invalid in search of health, the business man broken down with work, and the neurotic patient worn to a shadow with endless worry. In summer there is the ever popular seaside resort, with its fishing and bathing. Numerous steamers ply along the coast and westward to the adjacent islands, giving endless opportunities for exploring a variety of coast line and country. There are numerous drives for those who prefer excursions on land to the canons and glorious mountains. There is a rich and varied field for the scientist and sporting man. In fact, there is a combination of climate, soil, and shelter, with a purely aseptic atmosphere, which makes the invalid turn his attention to South California when looking for a new home.

In endeavouring to determine the suitability of South California for the treatment of phthisis pulmonalis in its various forms and stages, one is forced by the tables of figures already given to the conclusion that this section of country on and near the coast is a moderately moist one. I would earnestly recommend that patients who are sent here be advised to remain in the centres of population only long enough to find out which is the best location for them. Far be it from me to say that many apparent recoveries have not taken place in the cities on and near the coast. Personal experience has decidedly made me feel strongly against the coast of the Pacific. Results attained inland have been very satisfactory.

The following cases do particularly well here:—

1. Chronic tubercular phthisis in all its stages if unattended by fever. A chronic case without pyrexia cannot be expected to improve unless there is sufficient lung space to enable exercise to be taken.
2. Large secreting cavities dry rapidly on the mountains.
3. Phthisis with bronchiectasis.
4. Phthisis with a tendency to develop from time to time catarrh of the bronchial tubes, pneumonia, or pleuro-pneumonia.

Many cases of acute tuberculosis attended with much pyrexia come here and die in a few months; indeed, they are such cases as can derive no benefit in any climate. The most rapidly fatal cases of acute pulmonary tuberculosis which I have seen have been in young adults born on this coast. Phthisical cases attended with continued pyrexia and cases of laryngeal phthisis should not come here. Many people arrive with advanced disease in kidneys and bowels, and frequently die in a day or two. It would add much to the comfort of such patients if their physician would insist on keeping them at home to die surrounded by friends and home comforts.

Southern California is usually looked on as a winter resort only. While it is true that our winters are beneficial to the invalid, it is yet more true of our summers. No greater mistake can be made than leaving this country in summer if improvement in health is taking place. On the approach of June, when a change of location becomes necessary, a few hours ride will place one at any altitude that may be desired among ancient pines on the mountains. Persons suffering from cardiac trouble or other illness which might preclude the possibility of going to the mountains, can find comfort and amusement at the sea-shore, provided residence there is not contra-indicated. Every precaution is taken for the comfort and well-being of the traveller at the mountain camps and at the hotels on the coast.

These changes are all found at comparatively short distances, and by taking advantage of such changes the consumptive can be cured in many cases, and his life prolonged in many more.

THE MEDICAL TREATMENT OF INTESTINAL OBSTRUCTION, WITH A SERIES OF NINE CASES.

By WILLIAM HUNTLY, M.A., M.D., B.Sc.,
Jodhpore, Rajputana.

In the March and April numbers of the *Journal* for 1892 there appears a report of a discussion on the acute form of intestinal obstruction. The discussion was closed with those words of the President—"To surgery alone we can look for cure." Had the term "alone" been left out, or some such term as "mainly" put in its place, I should perhaps have never thought of writing on the subject. But when the discussion is carefully read over, and when a survey of the whole field is taken, the above can hardly be considered a just summing up. If it means anything, it implies the total inability, and, at least, the confessed inability, of medicine to cure this affection in any of its forms. That it does not represent the opinions of all who took part in the discussion will be evident from the remarks of Dr. H. C. Cameron, Dr. Fleming, and even Professor G. Buchanan; and, if it be a true finding, we need only ponder over Professor Gairdner's remarks to see how ineffectual an instrument it has proved itself. In Professor Buchanan's experience of cases which had not been operated on, "more had recovered than died." Professor Gairdner reminded the meeting that it was necessary not to lose sight of the fact "that a spontaneous cure was possible in some of those cases." The zealous surgeon, when death ensues without his aid being called in, regretfully says that there might have been a chance had something been done, leaving the luckless physician reproaching himself for some fancied lack of duty. On the other hand, when, after surgical interference, death ensues, the surgeon consolingly adds that everything possible has been done! If recovery takes place after operation, the operation gets the benefit, and if death happens, the surgeon takes none of the blame; if, again, recovery takes place under medical treatment, the result is credited to Nature and spontaneous cure, and if death happen, the physician has to bear the blame—a state of affairs which is far from cheering to the physician.

Now, we have only to look over the statistics of the surgery of intestinal obstruction to see how slender are the grounds on which the surgeon rests his assumption. No severer condemnation of this itch for surgery is needed than the words of Professor Gairdner. From his enquiries, "it appeared at least doubtful whether a life had been saved by laparotomy in internal strangulation, for during the seventeen years of its existence, no successful case of operation for acute intestinal obstruction had been brought to his knowledge." Treves, an authority and an advocate of surgery, confesses to a mortality of 72·7 per cent for intussusception where laparotomy was performed, and, exclusive of intussusception, laparatomy for other forms of obstruction shows a death-rate of 63·1 per cent.

In a record of cases by Lawford Knaggs,* we find a mortality of 29 deaths in 37 operations. These are records of that surgery to which we are invited to fly. But, retorts the surgeon, we do not get the cases early enough; give us them in time, and the mortality will decrease. Ten years ago I heard the same plaint. Now it is not so much a complaint as an excuse for non-success.

In Knaggs' list of operations many of them were operated on early. The duration of symptoms before operation was:—

In 1 case,	24 hours	acute symptoms.
„ 3 cases,	3 days	„
„ 4 „	4 „	„
„ 4 „	5 „	„
„ 4 „	7 „	„
„ 2 „	10 „	„

And all were unsuccessful.

It seems to me that while physicians honestly give Nature its full due in the curative process, surgeons seem to ignore the part that kindly Nature plays in their operations. It is certainly a much more potent factor than "early."

The other day I came across a woman who had survived a fracture of the skull (depressed) of 5 inches in length. The accident took place some years ago, and the depression is still well marked. I have also come across two cases of wounds of the abdomen with extrusion of the bowel. In both cases the native doctor did what he could in cleansing the protruded bowel, replacing it and sewing up the abdominal wound, with recovery in both. Surgeons in these intestinal cases would do well to remember that even in their province kindly Nature, when helped, helps in return, and that the *post hoc* and *propter hoc* are applicable in surgery as in medicine.

Even after complete obstruction lasting three weeks a successful operation with Nature's help has been recorded in the

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* *Lancet*, 4th and 11th June, 1887.

Lancet for April, 1887. Nature had clearly something to do with Professor Buchanan's successful case. He was evidenly surprised himself, and does not advocate operation when acrid peritonitis, as in his case, was present, for he urged operation "before peritonitis ensued."

As the summing up of the President stands, it is decidedly discouraging to doctors working at a distance from large hospitals. Grant that the statistics in our best equipped hospitals were favourable (a most generous supposition), a large number of cases lie outside the possibility of hospital care, and in such cases the doctor in attendance will go very heartlessly about his work, a state of things always to be avoided as well for the sake of the doctor as the patient.

In cases, moreover, where the patient will not submit to operation, the doctor will feel little inclined to put forth any real effort.

A still further objection to the objectionable sentence is its misleading character. It implies that if the chances from operation are not very bright, those from medical treatment are literally hopeless, and this is not in accordance with fact.

Again, noting the remarks of Professor Buchanan and Professor Gairdner, I would submit my own experience of such cases in India. I came out to India having imbibed the dictum that early operation was the treatment in such cases. I soon found that the native would never in those cases submit to operation, and yet they earnestly begged me to try something. In addition to the ordinary orthodox teaching on the subject, a volume on intestinal obstruction from the pen of Hugh Owen Thomas of Liverpool, given me by the writer himself, was beside me. Studying this carefully, I resolved to give it a fair trial. I should here interpolate that I have never yet seen a just summary of his methods; this I mention because I have read scant notices of it, which are neither fair to the facts nor to the writer.

Nine cases of acute intestinal obstruction have come directly under my care. Of these four were treated in hospital and five in their own homes. My non-successes are four in number, my successes five.

Two of the four who died were seen only a few hours before death; in reality I did not treat them, yet as they came under my notice, I include them in the list. The third was an old man who had been previously treated with all manner of drastic purgatives. He suffered greatly from distension, hiccough, and vomiting, and though the symptoms were somewhat alleviated by treatment, he died on the third day after admission to hospital. The fourth non-success died five days after admission. From the *post-mortem* there was clear evidence that the disease was in process of resolution, and but for the indiscretion of the patient in suddenly rising contrary to orders (the result being his falling back dead), the case might not have ended fatally.

Against the four deaths I have had five recoveries.

In one of them the diagnosis of volvulus was almost certain. There was a history of suddenness of attack, the pain and tympanitis were definitely localised, and the obstruction was complete. The tumour was easily seen in the ilio-cæcal region. Whatever it was, under medical regimen, &c., relief was obtained on the nineteenth day after admission, and the patient left a fortnight later. Throughout the illness there was only one day in which the tympanitis tended to become general. The diet consisted of a little watery native gruel. In this case I committed a mistake. Under what I believe to be the rational treatment for this affection, the tumour subsided, and on the fourth day after her admission vomiting, hiccough, abdominal pain, and tension had disappeared. I thought that, as the physical signs had gone, Nature had corrected the abnormality, and yielding to the entreaties of the patient, with the view of accelerating matters and aiding the bowel in relieving itself, I administered a gentle purgative. My judgment reproached me for this irrational measure almost as soon as the laxative was given. Rather anxiously I went back to hospital in the evening, to find, as I feared, the reappearance of the tumour, pain, &c. After this error in treatment, the tension for a time became general. In a few days the violence of the symptoms was controlled, and up till the nineteenth day the patient never had an acute symptom except pain. The primary relief was followed in a day or two by secondary relief. Between the primary and secondary relief which are observed in those cases, no laxative whatever was given. It is wonderful to see how Nature, without adventitious help, and in the face of the effects of a drug which naturally opposes her action, accomplishes her full purpose in those cases which terminate favourably. Relief in the second successful case, that of a woman, took place on the thirteenth day.

The third successful case was that of a man in hospital for treatment of compound comminuted fracture of the lower end of the humerus into the elbow joint. The patient and his friends prayed daily for some purgative, and though I pitied the man in his already weakened state having to submit to the almost starvation diet to which I subjected him, I remained firm, with the happy result that on the fifteenth day the anxiously looked for relief occurred, and the patient is now walking about with the abdominal trouble cured, and a fairly useful arm. This case happened only a few months ago.

The fourth successful case I saw early enough to satisfy even the impatience of the most zealous surgeon. I saw him a few hours after the onset of pain, with an abdomen becoming tense, absolute obstruction, vomiting, almost total suppression of urine, the tongue dry, and an anxious, haggard expression on his face. He was a water carrier, and while jerking up the leathern water bucket, had suddenly been seized with pain, followed soon after by the other symptoms, and with great thirst.

The treatment with him, as with the others, was conducted on the lines laid down by Thomas, and I considered this was exactly such a case as surgery might take as a test. If success was to follow early surgery, it would be worth seeking success by Thomas's method. In this case the patient quickly responded to treatment, and on the following day primary relief ensued, followed at an interval of twelve hours by secondary relief. The fifth case recovered on the fifth day after admission, and does not call for remark.

The medical treatment has no claim to originality. It has been, however, greatly misunderstood, much scouted, and abundantly misrepresented. It is lightly talked of as the opium treatment, it is described as "masking symptoms," and its commentators seem to have that small modicum of knowledge about it which makes its practice in their hands a dangerous thing. This is a summary of Treves' idea of medical treatment:—"In several of these cases relief has attended the free administration of opium, followed, after a while, by copious and repeated enemas and gentle laxatives." My first successful case, noted above, is an example of the danger of following the above advice, and the two methods mentioned of opium and gentle laxatives are contradictory. By a strange perversity, deaths which will result frequently from pursuing Treves' medical method are ascribed to opium. "The operation should be performed within the first twenty-four or forty-eight hours" in the case of the young, writes Treves. Thus, medical treatment is expected to receive a fair trial within such a time. This is, I need hardly say, illogical on the face of it. The proper moment for the intervention of surgery is neither that defined as "early" nor "twenty-four or forty-eight hours." It depends altogether on the amenability of the patient to rational medical treatment. In one of my unsuccessful cases I wished to operate, as the symptoms pointed in the direction of operation; while in the successful cases, which from the outset became amenable to Thomas's treatment, a patient waiting of thirteen, fifteen, and nineteen days was rewarded by the recovery of my patients.

In a careful perusal of Thomas's list of cases, the facts and percentages of recovery are certainly far and away more encouraging than any others I have seen. Thomas gives a series of 40 cases. Excluding 12 of them as being rather typhlitic and peri-typhlitic, we find a mortality of 7 in 28. In 6 of these the trocar was also requisitioned. Relief in 12 cases took place between the eighth and twentieth days; in 9 cases between the twentieth and thirty-first days. In 1 case enterotomy was performed.

Of the 7 fatal cases, 4 deaths were due to after indiscretions in diet—one patient feeling so well that he took a meal of "fried sole, new potatoes, and fresh rolls," dying collapsed a few hours later!

The mention of the operation of enterotomy will be sufficient to explain that Thomas was not an opponent of operation *per se.* For a full account of Thomas's method I can only refer readers to his book,* and would add that the use of opium in the haphazard way, and with the half-hearted reasons given for its use by Treves and others, will only lead to disappointment. For myself, nothing in medicine or surgery has given me more cheer in my work than the carrying out of Thomas's principles in those most anxious cases.

For cases in which surgery, even where available, is barred by the patient, Treves' advice means a stray recovery amid an alarming mortality, while Thomas's method will, I am sure, as has happened in my own actual experience, give better percentages than surgery and a more hopeful prospect for the patient.

In the compilation of surgical cases, there is a class of cases which it seems to me should not be credited to surgery. I refer to the number of cases in which laparotomy is performed and the surgeon finds that he can do nothing; the abdomen is closed, and sometimes the patient in a day or two after gets relief. The opening of the abdomen is in some mysterious way credited with the cure. Yet, while believing that simple opening is followed and may be the cause of cure, it has no right to be put to the surgeon's credit. The effects produced on the general system and on the nervous system of the abdomen by mere opening have been, in such cases, the factors in bringing about a cure, and not the active interference of the surgeon. What these effects, nervous and other, are should be enquired into, and when ascertained, we may find means for bringing about the same change in and around the viscera by means other than surgical, and thus put the patient in the way of cure without the risks of abdominal section, which, as has been pointed out by Dr. Cameron, has dangers in these cases peculiar to itself.

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* H. O. Thomas, *Intestinal Disease and Obstruction.*

The general disappointment experienced in these cases will not be removed by their wholesale transfer to the surgeon's care, more especially if he be an "early" surgeon. Medicine and surgery should go hand in hand. It may be that operation will be seen to be required a few hours after seeing the patient, it may be that no operation may be needed for weeks, or not at all. Obstinacy on the medical side is as foolish as rashness on the surgical. The true order, certainly, is rational medicine attended by rational surgery. Irrational medicine, however, is worse than rash surgery.

Professor Macewen's statistics of 9 in 25 can be put beside Thomas's 7 in 28, but an approach to Thomas's statistics comes much more within the aim and grasp of medical men by adopting his treatment, than an expectation of equalling Macewen's statistics can be entertained by surgeons in small imperfectly equipped institutions the wide world over. For surgeons thus situated, and for medical men who cannot, for various reasons, avail themselves of surgery, and for those cases where surgery is not allowed, even where available, as in my own cases, my own experience urges me to submit these notes, and recommend a careful trial of Thomas's methods.

Professor Macewen, while admitting (as every surgeon must do) that recovery has taken place after the symptoms had lasted for weeks, added that "one was never sure of what would be the issue." But his own unequalled results do not make the recovery of the patient a certainty; the exploratory diagnosis by the two fingers is not always allowed; and even under the best surgery the last word in the discussion is not, "To surgery alone we can look for cure," but rather, "One was never sure of what would be the issue."

Where surgery and good nursing are available, I need hardly add that the whole tenor of my notes leads to the position taken up in the discussion by Dr. H. C. Cameron.

CURRENT TOPICS.

Faculty of Physicians and Surgeons—Opening of the New Hall.—An interesting ceremony was held in the buildings of the Faculty, St. Vincent Street, on the afternoon of Thursday, 25th May, 1893, when the New Hall was formally opened. The Fellows, and a number of prominent citizens who had been invited to be present, gathered in the library at 1·30 p.m., and, after a short period devoted to conversation and inspection of some interesting volumes laid on the tables, they adjourned to the New Hall, where luncheon had been set. The President (Dr. David Yellowlees) occupied the chair, and the Visitor (Dr. Bruce Goff) and the Treasurer (Dr. Maclaren) acted as croupiers. Among the guests present were Sir Spencer Wells, Bart.; Ex-Bailie Cumming, representing the Lord Provost; the Lord Dean of Guild (Mr. Guthrie Smith); the President of the Chamber of Commerce (Mr. Bannerman); the Dean of the Faculty of Procurators (Mr. James Graham); Mr. Sheriff Spens; Mr. Hugh Brown, Chairman of the Royal Infirmary; Mr. David M'Cowan, Treasurer of the Royal Infirmary; Mr. J. J. Burnet, the architect, and others. The Fellows were well represented, from the country districts as well as from the city itself, and, in all, about seventy gentlemen sat down to luncheon. The toast of the Faculty was proposed by Professor M'Kendrick, and responded to from the chair. Sir Spencer Wells, Bart., who was visiting Glasgow in connection with his duties as Honorary President of the Obstetrical and Gynæcological Society, replied for the guests, and, in the course of some allusion to the land of his nativity, took occasion quietly to remark that he supposed "we might still regard England as an integral part of our great country." This humorous and kindly allusion to current public events was keenly enjoyed by the assemblage. There was universal agreement amongst the gentlemen present that the architect, Mr. J. J. Burnet, had accomplished his task in a highly artistic and altogether satisfactory manner. The flight of stairs, which connects the old building with the new, and which leads to the folding doors of the New Hall, has been so arranged and designed as not only to be a thing of beauty and grace in itself, but to give no indication whatever of the Hall being simply an addition. That this double effect should have been so successfully accomplished implied no mean architectural skill. The roof is lofty, and the windows are raised high above the level of the floor. The Faculty portraits are arranged beneath the windows, and the intervening spaces are covered with tapestry. At one end of the Hall is an antique fireplace of great artistic beauty, surmounted by the Faculty arms. Below the Hall is a suite of examination and waiting rooms, which must greatly facilitate the labours of the examiners at their allotted tasks. Chemical examinations can be conducted in an equipped laboratory, and regular dissecting room accommodation can be arranged. It is not easy to imagine more convenient premises for the purpose of examination than the Faculty now possesses. The carved wood-work of the Hall and its approaches are very fine, and it is not too much to say that the new chamber may well rank as one of the sights of the city. By this addition to their buildings, the Faculty has obtained a great deal of much needed space for the accommodation of its ever increasing and very valuable library.

Glasgow Medico-Chirurgical Society.—At the annual general meeting of the Society, held in the Faculty Hall, 242 St. Vincent Street, Glasgow, on Friday, 12th May, 1893, the following gentlemen were elected office-bearers for session 1893-94:—

President, . .	Dr. Hector C. Cameron.
	Section of Medicine.
Vice-President, . .	Dr. Middleton.
Councillors, . .	Dr. Auld and Dr. W. A. M'Lachlan.
Secretary, . . .	Dr. C. O. Hawthorne.
	Section of Surgery.
Vice-President, . .	Dr. W. J. Fleming.
Councillors, . .	Dr. Dalziel and Dr. Macphail.
Secretary, . . .	Dr. John Barlow.
	Section of Pathology.
Vice-President, . .	Dr. Charles Workman.
Councillors, . .	Dr. John Brown and Dr. T. K. Monro.
Secretary, . . .	Dr. R. M. Buchanan.
	Section of Obstetrics.
Vice-President, . .	Dr. M. Cameron.
Councillors, . .	Dr. Lapraik and Dr. Jardine.
Secretary, . . .	Dr. Lawrence Oliphant.
Treasurer, . .	Mr. Henry E. Clark, 24 India Street.
General Secretary, .	Dr. Walker Downie, 4 Woodside Crescent.

International Congress at Rome.—Gentlemen in Glasgow and the West of Scotland, who think of going to Rome in September, might kindly send in their names to Dr. Quintin M'Lennan, Pitt Street, or to Dr. J. Lindsay Steven, 34 Berkeley Terrace.

REVIEWS.

Clinique des Maladies du Système Nerveux (*Hospice de la Salpêtrière*): M. le Professeur Charcot. *Leçons du Professeur, Mémoires, Notes et Observations.* Tome I, 1892. Paris: Aux Bureaux du *Progrès Médical.*

This volume is a most interesting one. In it are contained a series of papers upon many of the rarer nervous diseases, some of those papers being reports of clinical lectures by Professor Charcot himself, while others are reproductions of publications by certain of his assistants. All are based upon work done in the Salpêtrière, and under Charcot's supervision. There is a preface by the professor himself, and M. Georges Guinon, his *chef de clinique*, has acted as editor of the present series, which comprises the most interesting material available for sessions 1889-90 and 1890-91. We are glad to notice that this is intended merely as a first instalment, and have no doubt that succeeding volumes, as they appear, will prove equally valuable.

We may indicate briefly the different subjects treated of in the present volume; and, first, there are four papers bearing on the study of syringomyelia and allied diseases. In these we find records of the discussion as to the identity or non-identity of syringomyelia and Morvan's disease; in a lecture of 6th December, 1889, the two are held to be distinct, but in March, 1891, after Joffroy's observations, that view is abandoned. No fewer than seven or eight of the papers have relation to symptoms attributed to hysteria, and the importance to the surgeon of a knowledge of that disease is insisted upon, the danger of immovable apparatus in certain circumstances being specially insisted upon. Then there are several papers which may be grouped together as discussing various phases of ophthalmoplegia, with others on atypical cases of disseminated sclerosis, cerebral syphilis, and diabetic paralysis. Lastly, there are several dealing with localised amyotrophic paralyses complicating sciatica. The conclusions arrived at in connection with this last mentioned subject are given in tabular form, and may thus be repeated in full:—

"1. There is a complication of sciatica, which is little known, and which consists of a neuritis localised to a single branch of that nerve, the external popliteal, and characterised by motor and sensory troubles affecting the muscles and portions of skin supplied by the nervous trunk in question.

"2. This complication is found in simple sciatica, in which, it is true, no one has previously described it, as well as in traumatic sciatica due to implication of the branches of origin of the nerve in the pelvis, in which form it is already recognised.

"3. The etiology and pathology (of the affection) do not seem to present any point of special importance. The theories put forward to explain the traumatic cases already observed are disproved by the study of the cases of simple sciatica. It would appear that for the moment one must be content with the old interpretation—the preference of neuritis for the extensors.

"4. Be that as it may, we have usually to do with a serious complication, with a grave enough prognosis, dominated by the presence of a neuritis with degenerative atrophy of the muscles."

Among many other facts which might be mentioned, we would only note further that gout is included as an etiological factor in certain neuroses, that hypnotism has been tried in a few of the cases quoted, and that Charcot's watchword for the treatment of cerebral syphilis is *frapper vite et fort*, iodide of potass being still recommended by him in daily doses of from 3 to 5 grammes combined at once with mercurial inunction.

Elementary Physiology for Students. By ALFRED T. SCHOFIELD, M.D., M.R.C.S., &c. With 2 Coloured Plates and other Illustrations. London: Cassell and Company, Limited. 1892.

IN this manual of 372 pages the author attempts "to present to the student of physiology the leading facts of the science in a fuller way than is generally found in a work of this size." He endeavours to accomplish this "by omitting long discussions of rival views," "long lists of names and authorities," and by giving "very sparingly detailed descriptions of the machines by which the results recorded have been obtained." Conciseness is no doubt a requisite in a manual of this kind, but clearness and accuracy of statement are, we imagine, of even greater importance, and a few extracts from the book will show that there is considerable room for improvement in these respects. Thus, at p. 35 we read, "Spiculæ of lime shoot inwards from these growing cells in *osteoblasts;*" at p. 40, "Sodium chloride occurs everywhere, and is absolutely necessary for existence;" at p. 44, "The amount of hydrogen and oxygen in the solids are of no moment, as they can be supplied by air and water;" at p. 62, digested starch becomes "all maltose;" at p. 63, the human submaxillary is a "serous or true salivary gland;" at p. 76, gastric juice "acts like saliva, by means of a ferment called pepsin;" at p. 86, "The last form of glands are Brunner's, and are only found in the duodenum;" at p. 149, "The heat of the body consists in the combustion of O with the production of CO_2 and water;" at p. 156, "The process of respiration in the animal kingdom is the reverse of that in the vegetable;" at p. 158, "The upper four inches of the tube (the windpipe) is much enlarged into a sort of box which forms the organ of voice, and is called the larynx;" at p. 213, Dobie's line "is now proved to be a thin membrane (Krause's)." What is the student to make of the statement on p. 118, "That the fibrin is a product of the plasma and not of the corpuscles is plain, because it is formed when no corpuscles are present; and, on the other hand, *if the fibrin be removed or the blood be defibrinated* by whipping it with twigs, and the corpuscles and serum are left, *no fibrin or clot will be formed*"? (The italics are ours.) Ophthalmologists please note, p. 47, that "dogs fed on sugar and water remain healthy a week, then get ulcers on their eyes (as Hindoos do, who live solely on rice), and die in a month." On p. 46 we find mentioned a hitherto unknown body, "urea CN_2H_4, a form of ammonia;" on p. 110, that "the blood is hotter in the hepatic than in the fœtal circulation." The Latinity of "fasciculus cuneatum," "corpus quadrigemina," or "crico-arytenoidei lateralis," is quite on a par with "three different medias," the island of "Rheil," the "Casserian" ganglion, "Barraud," discoverer of the glycogenic function of the liver, "Bozzezero" with his blood-plates, "Lewenhock," the "dichrotic" pulse, the diverticle or "cap" of the pelvis (of the kidney) called a calyx, or the "roots" of Corti; but really when we have met with "two small plexi of arteries" on p. 148, and "two capillary plexus" on p. 164, we hardly expect such a simple plural as three "plexuses" on p. 223. Would it be wrong to suggest that the author wishes to *per*-plex*us?* An anatomist might ask further information regarding the "posterior elastic layers" (p. 308) of the cornea, a chemist about "the urea of birds and snakes" containing great quantities of uric acid (p. 192), or how $CO(N_2H_2)_2 + CH_2O = CO(NHO)_2$ (p. 191), or a mathematician, about the statement that the red blood corpuscles present a surface of some 3,000 square miles (p. 111). The mode of estimating the number of corpuscles in blood is wrongly stated; 10,000 colourless corpuscles per cubic inch should be per cubic millimetre; Gmelin's test for bile pigments is wrongly given; there are not usually 15 grains a day of hippuric acid in urine (p. 193). There are upwards of 200 illustrations, the vast majority of these being taken without acknowledgment from the works of other authors; too much space has certainly not been taken up with diagrams of physiological apparatus, the only instrument figured being a Higginson's syringe. We have only pointed out a few of many mistakes that have been noticed. When we remember how many good manuals of physiology have already been published, we cannot but wonder at seeing such a slipshod production as this, and the student who reads it will do well in the first place to make himself acquainted with the science elsewhere, so that he may know what to accept and what to reject in this manual. On the whole, our advice to the student who intends to read it would be the same as that of Mr. Punch to those intending to marry—"Don't."

The Year-Book of Treatment for 1893. London: Cassell & Company, Limited.

THE present issue of this useful publication is fully up to the high standard of former volumes. The various therapeutic suggestions of the past year are carefully collected, arranged, and reviewed, so that we have, in a most handy and convenient form, the most recent hints and views on treatment in the several departments of practice. Indeed, the volumes of this book form one of the best works on practical therapeutics. This year there has been added a section on "Public Health and Hygiene." It is written by Professor W. H. Corfield, and includes references to the principal subjects of recent hygienic interest and importance.

Arcachon, in the Department of the Gironde, France: its Advantages as a Health Resort. By the REV. SAMUEL RADCLIFF, British Chaplain. Second Edition. With Medical Appendix by DR. FESTAL. London: Thos. Laurie. 1893.

THIS is an unpretentious guide-book to a watering-place and health resort on the Bay of Biscay. The place is only an hour and a quarter by rail from Bordeaux. An account of the town is given, and there are chapters on climate, places of residence, including hotels, housekeeping and its costs, and on sundry other matters of local interest. In the appendix by Dr. Festal it is claimed that the place is peculiarly suited for consumptives. The air is moist and the place is sheltered.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1892-93.

MEETING X.—17TH MARCH, 1893.

The President, DR. JOSEPH COATS, *in the Chair.*

I.—CASE OF MYXŒDEMA IN AN EARLY STAGE.

BY DR. R. M. BUCHANAN.

Dr. Buchanan showed the patient in this case, and gave the following account of her illness:—

"Cases of myxœdema are not frequently seen before the symptoms have become well marked. I have, therefore, taken the opportunity of bringing forward a case showing the disease, as I believe, in a comparatively early stage.

"Mrs. T., aged 58, came under observation in October last, at the Western Infirmary Dispensary. She had come on behalf of her husband for a renewal of his medicine, and her appearance prompted enquiries as to her own health. She confessed to being 'far from well,' though anxiety about her husband prevented her thinking much of her own state.

"She has had nine of a family, and two miscarriages. A daughter died seven years ago with epilepsy, and a son four years ago with 'decline of the bowels.' The former was ill for seven years, and the latter for about one year, and both caused the patient, as she states, 'a terribly anxious time.' The change of life occurred between 42 and 44, and 'flushings,' which had their commencement at that time, still continue to cause her much discomfort. She states that she suffered from the usual illnesses of childhood, and that she had 'water in the head' when about seven years of age. From that time till two years ago she suffered from severe attacks of headache and vomiting now and again.

"The present condition developed very gradually within the last two years. The patient's speech appeared to members of her family to become more and more slow; her memory also seemed to be failing, for she was frequently seen to put down an article and straightway to forget where she had laid it, and 'to lose the thread of her story' in conversation. It was also remarked that she became considerably stouter, and sometimes staggered in her walk as if intoxicated. Of these facts she is herself perfectly conscious, and says, moreover, that she has undergone some change in her expression which she cannot well explain. She states that she has never sweated much, but is conscious that lately she does not sweat at all except when leaning over a tub of warm water washing. Tears flow readily, however. The feet, especially the soles, feel sometimes intensely hot, sometimes very cold. She sits a great deal by the fire, and suffers occasionally from attacks of great oppression, as if the weather were very hot.

"The face presents a somewhat placid expression, with a yellowish tint in the skin and some capillary injection of the cheeks. The skin is loose around the eyes, and there is some puffiness of the lower eyelids. The hair of the head is very scanty over the vertex and in the temporal regions. The skin generally is coarse and dry, but there is no obvious alteration of the finger-nails or loss of teeth. All the special senses appear normal. Speech is monotonous, slightly raspy, and slow, as if the tongue moved laboriously. There is no difficulty in swallowing unless when this happens to be performed too quickly.

"The pulse is 62, and the temperature (taken in the mouth) 98·2° F. The urine shows no albumen."

Professor Gairdner spoke of a case of myxœdema which he had seen twenty-five years ago, and in which he had then had to confess, after repeated examinations of the urine and otherwise, that it was something he did not understand. The lady had had puffy countenance, and swelling of the fingers interfering with her removing her rings; but there had been no cretinism, and he did not remember any special disease of internal organs. The lady had gone abroad, and had consulted physicians in different parts of Europe, without any one having ever told her what was the matter, until at an hotel she had happened to meet a lady who had said to her that she seemed to be suffering from the same disease as herself, and that she ought to consult Dr. Ord. She had consulted Dr. Ord, who had diagnosed myxœdema, and, without knowing the previous circumstances, had sent her as a case of that disease to be under Dr. Gairdner's care. He had referred her to her family physician in Glasgow, and she still held on in fairly good health, though a well developed case of myxœdema.

II.—PAPER ON THE PATHOLOGY OF DEAF-MUTISM, BEING A REPORT ON THE EXAMINATION OF ONE HUNDRED AND SEVENTY-FIVE DEAF CHILDREN, INMATES OF THE GLASGOW INSTITUTION FOR DEAF AND DUMB.

By Dr. J. K. Love.

This paper will appear in the summer number of the *Archives of Otology*, but it may meantime be mentioned that the following were the main points dealt with. The children were tested by a large bell, a large tuning-fork, and the human voice. Sometimes Politzer's acoumeter was used, but for deaf-mutes it is not a test of much importance. Thus tested, the children were found to divide themselves into—

1. Those stone-deaf or having no aerial hearing, .		9
2. Those hearing very loud sounds—shouting, &c.,		81
3. Those hearing and distinguishing the voice—		
a. Vowels only, . .	20	33
b. Consonants and words,	13	
		123
Disqualified for testing because of youth, idiocy, &c.,		49
Dumb, but hearing perfectly, ...		3
		175

Of the 9 totally deaf, by far the larger number were cases of congenital deafness. It was found also that of those who could hear and distinguish the voice, much the larger number were cases of acquired deafness. A conclusion at variance with that drawn by most authorities must, therefore, be here drawn, and it is this—congenital deafness is much more severe than acquired deafness when cases are examined in class.

The causes of acquired deafness were next discussed, and almost the half of these were found due to primary disease or injury in the brain or internal ear, without apparent disease of the middle or external ear.

Measles and scarlet fever were found responsible for, in all, 13 cases, and examination of the ears, together with a study of the history of the cases, made it clear that these diseases may cause deaf-mutism either by primary mischief in the internal ear, or by communication of disease from the middle ear.

Sixty-one cases of normal membrane were found amongst the 175 children. Thirty-two showed suppurative disease, and nearly 80 catarrhal changes. The pharynx was diseased in most of the cases.

Dr. Barr spoke of the paper as being a very important and valuable contribution to the knowledge of deaf-mutism. It was only those who had engaged in such work who could appreciate the difficulties and labour involved in it. It was very satisfactory that such an investigation as Dr. Love's should have such a hopeful practical outcome as he had indicated; there were, as he had said, 10 per cent of the cases who had such an amount of hearing as to enable their perception of sound to be taken advantage of in educating them. He noticed that Dr. Love had found that a very large proportion possessed a certain degree of hearing, only 9 out of 175 being totally deaf. This was contrary to the results of Dr. Roosa of New York and others, but confirmed his own (Dr. Barr's) experience. He had had, a year or so ago, an opportunity of testing the hearing power of *adult* deaf-mutes, having been asked to deliver a lecture in the Deaf-mute Institute, and having taken as his subject "Sound made visible." He had tested the hearing of those present as to very loud sounds by exploding a mixture of oxygen and hydrogen: the loud intense crack resulting had been detected by the ears of the great majority of the 120 present. Ten or twelve had failed to hear it on the first occasion, but on their being brought closer to the platform a number of them were able to detect the sound on its being repeated. Only six or seven had been found absolutely destitute of hearing so far as could be thus determined, and those numbers corresponded very closely with Dr. Love's—his nine cases being, strictly speaking, not out of 175, but out of 123 who were suitable for testing.

Then, with regard to causation, he was frequently consulted by parents about children who were supposed to be deaf-mutes. He found that in 75 per cent the condition was attributed to some intra-cranial affection—*e.g.*, "water in the head," "convulsions," "inflammation of the brain," these being terms founded upon the opinion of the doctor in attendance during some illness, which seemed to leave the deafness as a result. Probably in a considerable number of these cases, Dr. Barr said, the cause was cerebro-spinal meningitis. That disease might be rare in Scotland, but now and then cases did occur, as, *e.g.*, those recorded some time ago by Dr. Frew, then of Galston. Among his cases (Dr. Frew's) one or two of the children had been rendered deaf by the attack.

With regard to the tympanic membrane, he could not attribute the deafness in a great many of those cases to the changes in the tympanic membrane. He had been much struck, a number of years ago, in testing labouring persons whose hearing was normal, so far as they could say, and yet who had chalky deposits, cicatrices, &c., in their tympanic membranes. No doubt many of the changes seen among those deaf-mutes were accidental. In all forms of such extreme deafness as gave deaf-mutism, the injury must be in the internal ear or labyrinth.

Dr. Erskine congratulated Dr. Love on the use he was making of the material at his disposal in the Deaf and Dumb Institution. Dr. Love had spoken of the statistics of congenital and acquired deaf-mutism. Dr. Erskine agreed that there were more cases acquired than congenital, and Grüber was known to hold that view; at the same time, speaking from his own experience, Dr. Erskine was inclined to consider that congenital cases were more frequent than was sometimes recognised. It was very difficult to diagnose a case of deafness with consequent mutism under 4 years, and, as a rule, the parents, anxious to explain away the defect, were inclined to mention some supposed cause (*e.g.*, a fall), but this should not always be accepted. The cases with such definite lesions as occurred in scarlet fever were easy to diagnose, and scarlet fever was responsible for a good many of the cases. Dr. Love's paper should draw the attention of practitioners to the consideration of the ear-complications in the course of such diseases as scarlet fever and measles, for much of the evil after-effect might be averted by early and suitable treatment.

He would agree with Dr. Love that children who undoubtedly suffered from congenital deafness were deafer than those with acquired deafness. It was interesting to note how many had sufficient remnant of hearing to admit of its being utilisable for educational purposes.

In reply to a further remark of Dr. Erskine's, *Dr. Love* explained that he had left the question of heredity in deaf-mutism for consideration in a subsequent paper, which will be published shortly in the *Glasgow Medical Journal.*

Discussion of Dr. Love's present paper was discontinued to admit of the meeting's having illustrations from Mr. Addison, Superintendent, of the methods of instruction employed in the Institution for Deaf and Dumb.

Thereafter the *President* expressed the thanks of those present to Mr. Addison for attending, and for the interest of his demonstration.

MEETING XI.—7TH APRIL, 1893.

SURGICAL SECTION.

DR. CHARLES WORKMAN *in the Chair.*

I.—FRESH SPECIMEN.

BY DR. E. V. GIBSON.

Dr. Gibson showed the pelvic organs of a female child, 6 weeks old, there being cystic degeneration of the left ovary.

II.—PATIENT FROM WHOM A SMALL INTRINSIC EPITHELIOMA OF THE LARYNX HAD BEEN REMOVED BY THYROTOMY ON 13TH FEBRUARY, 1891, WITH, AS YET, NO RECURRENCE.

BY DR. DAVID NEWMAN.

This patient was shown by Dr. Newman, who intends publishing the case along with some others. Discussion upon it follows with Case III.

III.—PATIENT, FROM WHOSE LEFT VOCAL CORD AN EPITHELIOMA HAD BEEN REMOVED BY LARYNGOTOMY IN SEPTEMBER, 1892, WITH MARKED IMPROVEMENT IN VOICE, AND NO RECURRENCE AS YET.

BY DR. WALKER DOWNIE.

Dr. Downie's report occurs at p. 373 as an original article. Sections of the tumour were shown under the microscope.

Mr. Clark spoke of the interest of the cases, especially in so far as they showed how hopeful the prognosis might be in epithelioma of the larynx, if the diagnosis were made early enough and the mass thoroughly removed; ordinarily epithelioma of the larynx was regarded as being very fatal. Dr. Downie's case was, however, too recent to admit of much being founded upon it yet. Mr. Clark did not see why epithelioma of the larynx should not be removed with as good hope of delayed recurrence or of non-recurrence as, for example, in the case of epithelioma of the lip, but, on the other hand, it must be remembered that even about the mouth itself they had differences, epitheliomata of the lip and of the tongue showing a marked contrast as regards prognosis. On the true vocal cords, where the mucous membrane was thin and the epithelium flat-celled, epitheliomata were likely to be less rapid and less likely to recur than on the false cords where the mucous membrane was thicker and richer in glands. The majority of epitheliomata of the larynx, he believed, occurred on the true cords.

The preliminary tracheotomy, which had been performed in each case, was a most important point to bear in mind; by means of it, one could get rid of the irritability of the larynx, which was so troublesome if present at the time of the major operation. It was striking, too, how much better a view of the growth might be obtained during the laryngeal operation than with the laryngoscope.

Dr. Workman thanked Dr. Newman and Dr. Downie for having brought the cases forward. It seemed clear, he said, that often in epithelioma of the larynx great good might be done, and life preserved for a length of time by early operation.

Dr. Newman considered that Dr. Downie had drawn attention to a very important fact, which had occurred in connection with his (Dr. Downie's) case—viz., the difference in the results which might be obtained on examining by the laryngoscope and by the wound. Usually the growth was much larger than one anticipated (judging from the laryngoscope), and this ought always to be kept in view in making choice of operation; indeed, one should never fix definitely beforehand what operation was to be performed.

In both cases the growth had been on the left side. Statistics showed over 70 per cent to be on the left side, though he had never heard any satisfactory explanation for this.

The preliminary tracheotomy was, as Mr. Clark had said, a most important point. The patient, by this means, became accustomed to breathing through his tracheotomy tube, and one could also take advantage of it by introducing a plug above it for preventing blood, &c., passing downwards into the trachea and bronchi. Dr. Newman would agree also with Mr. Clark's remark about the true and false cords; the growths on the latter were vascular, cellular, and highly malignant, while those on the true cords were almost non-vascular, spread very slowly, and were almost always squamous-celled. When the true cords were the seat of growth, the lymphatic glands were not affected early, perhaps not for two years; while with the growth higher up, on the arytenoids, at the base of the epiglottis, or on the false cords, the lymphatic glands were affected early—certainly within a period of months.

Dr. Downie also referred to the importance of a preliminary tracheotomy, whether the laryngotomy were for the removal of a simple or of a malignant tumour. His only fear about his patient was that his larynx was more than ordinarily vascular, and this might perhaps cause a greater tendency to recurrence.

IV.—PAPER ON MORVAN'S DISEASE, WITH ILLUSTRATIVE CASE.

By Dr. J. H. Pringle.

Dr. Pringle's paper, which will be published elsewhere in full, began with an account of the symptoms originally described by Morvan, as characteristic of the disease associated with his name, and proceeded to detail the different opinions, which have been expressed by various authorities, as to its pathology, and as to its relations to other diseases—in particular to syringomyelia and to anæsthetic leprosy. Several of the articles quoted may be found in the volume connected with the Salpêtrière *clinique*, of which mention is made on p. 436 of this number, while the nature of the questions raised on the subject may be gathered from one of the "Abstracts" at p. 464. Dr. Pringle was himself of the belief "that the condition of syringomyelia underlies the disease described by Morvan," but insisted that "the fact of the peripheral neuritis must not be forgotten; it may be to this that some of the special features of the disease" (Morvan) "owe their origin." Identity with leprosy he considered to be certainly not established, although the resemblance to the anæsthetic form of that disease seemed sometimes to be very close, as, *e.g.*, in the case of his own patient. Of the account given of her history, it is sufficient at present to give a short abstract. She had been under Dr. Pringle's observation for a period of eighteen months, having been first seen in October, 1891, when she was 23 years of age. About eight years before she had twice burned her left hand, and about five years before she had had the first of several whitlows in the left hand, the results of which were evident at the first examination, when there were also noted muscular atrophy in the left hand, and certain sensory disturbances in the left hand and arm. At that time there was also deficiency in the sense of temperature in the right arm, but no abnormality, except as regards reflexes, in the lower extremities; there was a small ulcer at the back of the left elbow; there were some white patches on the skin; and there was well-marked scoliosis, "probably due," Dr. Pringle thought, "to a weakness of the spinal muscles caused by the central disease." At subsequent examinations the symptoms were found to vary, especially in regard to the trophic lesions and the distribution of the sensory disturbances, and quite recently the heat-sense had been proved to be defective in the lower extremities. Thickening of the left ulnar nerve had been detected at the elbow. Examination for the bacillus of leprosy had been made (but without result) of the discharge from some ulcers, and of a portion of ulcerated skin which had been excised.

Mr. Clark had been pleased to hear such an interesting and careful account of Morvan's disease. The subject was evidently one which claimed attention, in order that they might be able to recognise other cases which they might meet. The historical details given showed that there was still something in medicine to learn.

Mr. Clark had been specially interested in what had been said about scoliosis, as he had recently been studying a number of cases of scoliosis, and in one or two of them there had been paresis of the lower extremities, and the question had thus arisen as to whether the original lesion had been in the spinal cord, giving a paresis of the muscles of the back with consequent scoliosis, or whether the scoliosis had been the original lesion, causing pressure on the cord, and having the paralytic phenomena as secondary results. In some of the cases it had been quite evident that the paresis was primary, and could not have been due to the scoliosis, and probably this was so in many cases of scoliosis.

Mr. Clark could confirm what Dr. Pringle had said about the thickening of the left ulnar nerve; there seemed to be no doubt about there being peripheral neuritis, but the trophic disturbances were specially interesting, and required much study.

Dr. Workman said that the peculiar white patches on the skin resembled very closely the descriptions of anæsthetic leprosy, but that leprosy would seem to be excluded here, as Dr. Pringle's careful examinations for the bacilli had been without result. The question as between Morvan's disease and syringomyelia could not yet be considered as settled, and they must keep their minds open for evidence upon it.

Dr. Pringle added that the failure to find bacilli in his case seemed specially conclusive as against leprosy, because bacilli had been found, not only in tubercular leprosy, but in the skin in anæsthetic leprosy (Hansen in *Virchow's Festschrift*); at the same time he thought that his case bore some resemblance to anæsthetic leprosy, especially in the markings on her neck. He referred also to the relations of the trophic changes and the peripheral neuritis, and to the part that they had taken in discussions as to the nature of Morvan's disease.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

SESSION 1892-93.

MEETING V.—13TH FEBRUARY, 1893.

The President, DR. SAMSON GEMMELL, *in the Chair.*

I.—TWO CASES OF OPTIC NEURITIS OF INTRACRANIAL ORIGIN.

BY DR. T. SPENCE MEIGHAN.

Dr. Meighan's paper appears as an original article at p. 405.

Dr. Alex. Robertson had examined both patients previously. In regard to the elder of the two, he wished to emphasise one or two points. In that case the dynamometer had brought out the difference in power between the arms, the left hand registering only 16 lb., while the right registered 35; the left leg was even more affected than the arm; but the face was only slightly involved in the loss of power, and that was of importance in regard to diagnosis. Then there was generally hiccough after food. His wife had also said that he was more distinctly emotional. In addition to the convulsive fits, he had been subject to attacks of *petit mal* up till the last three months. Percussion of the skull had yielded nothing definite. There had been no vomiting, but he was subject to giddiness.

With regard to diagnosis, there was no doubt that a gross lesion existed, and Dr. Robertson would say that it was of the nature of a tumour, while, in regard to localisation, there must be some difficulty, still, he thought the indications he had already mentioned would help. The hiccough after food indicated an irritation of the pneumogastric, and was more distinct and constant than they would expect if the cause were remote from the region of the medulla oblongata. The weakness on the left side of the body (from which the face suffered least, and the leg most) might be explained by a tumour in various situations, *e.g.*, in the internal capsule, but on account of the association with the hiccough, he was inclined to think that this paralysis pointed to a lesion lower down, and probably in the opposite (right) side of the cerebellum. In support of this idea there was the occipital pain. A morbid growth in the right hemisphere of the cerebellum, near the medulla oblongata, besides pressing indirectly on the anterior pyramid, might slightly irritate the nucleus of the pneumogastric, and thus explain the hiccough. It might be asked if the paralysis of the left side and other symptoms could not be caused by a small tumour in the medulla oblongata itself. That was just possible, but then one would expect its pressure to affect other of the nerves in that region. Were the new growth further forward, say in the corpora quadrigemina, they would have expected from pressure there still more definite symptoms. The emotional weakness reported by the patient's wife suggested an affection of the region of the pons, and a cerebellar tumour could quite intelligibly cause irritation there.

With regard to the younger patient, the symptoms did not help much in regard to localisation, unless by way of exclusion. There were no affections of other cranial nerves, no general affection of motion or sensation, no affection of breathing or of pulse. He would ask as to the special characters of the fit which had been reported. If it were of the nature of Jacksonian epilepsy, then help might be obtained from close observation of any others which might occur. Supposing nothing else to be discovered, the history pointed to the frontal lobes as the most probable seat of the lesion—there being headache (frontal and vertical) and want of mental power.

In reply to Dr. Meighan, Dr. Robertson stated that he considered it not unlikely that in both cases, but particularly in the younger, the disease was due to syphilis, and, in reply to various members, he added, in reference to the question of cerebellar lesion in the first case, that there were noted some slowness of speech and some inco-ordination, disturbances of respiration and pulse being, however, absent. The difficulty in regard to naming things he considered due to mental deterioration connected with his being so long subject to *petit mal.*

Dr. Workman referred to a similar case which he had shown to the Society (see *Transactions of Glasgow Pathological and Clinical Society*, vol. iii, p. 13).

Dr. Middleton suggested that a lesion in the situation spoken of by Dr. Robertson for the first case would have given rise to irritative symptoms, such as tremors.

Some discussion took place as to the connection between cerebellar lesions and hemiplegia.

II.—SPECIMEN OF SO-CALLED SIREN MALFORMATION OF THE LOWER LIMB (SYMPUS).

By Dr. Joseph Coats and Dr. John Adams.

Dr. Coats showed in this case—(1) the fœtus, (2) photographs taken of it in the fresh state, (3) the dissected bones of the lower limb, and (4) drawings of those bones, the dissection and drawings being by Mr. John H. Teacher. A full account of the case will be published.

In commenting on the case, Dr. Coats said that the prominent fact was that the limbs were so united that the plantar surfaces of the conjoined feet faced forwards, the great toes being outermost, while the patellæ faced backwards. The explanation for this was that the malformation had originated at an early period of fœtal life. The lower limbs were formed from a pair of buds coming out at the sides of the vertebral part of the trunk, the surfaces of the buds being dorsal and ventral. The borders (of the buds) nearest one another at first were those destined to become the outer or fibular borders; and in malformations such as the present those borders became fused to one another, and the natural spiral alteration in position could thus not take place.

It would be noticed in the specimen that, though the feet were joined together, there was an attempt at a second limb protruding below the knee. The probable explanation of this was that the foot was the first part of the limb to be formed; shortly after the buds appeared the toes might be seen, even before the leg or the thigh had begun to be formed. The head of the second tibia would thus appear to have formed here as usual; but it was separated from its corresponding foot, which had, at an earlier stage, fused with its fellow.

Förster, in his work on Misbildungen, had said that in the siren malformation the anus was absent. The present case must be an exceptional one in that respect.

Dr. John Adams described the circumstances connected with the confinement.

Dr. W. L. Reid had never seen any specimen at all like the present before. It was a most interesting one, though not so interesting to obstetricians as malformations by enlargement, because of the difficulties which the latter occasioned during delivery.

III.—SPECIMEN OF IMPERFORATE ANUS, WITH COMMUNICATION BETWEEN THE BOWEL AND THE PENILE PORTION OF THE URETHRA.

By Dr. Fleming and Dr. J. Lindsay Steven.

Dr. Fleming's account of the clinical aspects of the case is as follows:—

"W. S., age 3 days, was admitted to Glasgow Royal Infirmary at 8 P.M. on 24th January, 1893.

"*Note on Admission.*—The child is very small, feeble, and sickly. There is a faint dimple in the position of the anus, and there is a median raphé running down to this from the front. Flatus and fæces are being passed *per urethram.*

"Immediately on admission an incision was made in the perinæum (keeping well back in the sacral curve) to some considerable depth (2¼ inches). No bowel was found, and it was thought better not to explore further.

"On seeing the child next morning, I found considerable abdominal distension; fæculent matter still passed occasionally in very small quantities *per urethram.* As the child was very feeble, and the incision in the perinæum had been carried as deep as safety would permit, I at once performed left inguinal colotomy. I stitched the bowel to the edges of the wound with numerous silk sutures; and, having introduced through the whole thickness of the bowel two sutures parallel to each other, and about a quarter of an inch apart, and each having its entrance and exit about a quarter of an inch apart, I punctured the bowel in the centre of the quadrangle thus formed, introduced a small glass cannula, and, by tying each of the stitches round it, was able to completely fix it into the bowel, and prevent any escape of fæces alongside of it. By this means, with the aid of washing out and aspiration, the contents of the bowel were freely discharged, and the cannula remained *in situ* for more than forty-eight hours, when it came away, bringing with it the portion of bowel which had been ligatured round it. A round aperture was thus left in the bowel, through which fæces were discharged. Subsequently a piece of drainage tube had to be introduced to overcome the valvular character of the opening, and by it a free discharge of fæces was maintained to the end.

"On the 30th January (five days after colotomy was performed) there began constant twitchings of the right side of face, arm, hand, and to a less extent, of lower limb. There was no distension of abdomen, but castor oil and magnesia were given, and the bowels moved well. On the 31st there were general convulsions, lasting about ten minutes.

"After colotomy was performed fæcal matter ceased to pass *per urethram.* On the ninth day after operation, however, a small amount of fæces was again passed by the abnormal channel.

"On the 5th of February the child, who had been getting gradually weaker, died, aged 14 days, having lived eleven days since operation. Some slight twitchings of face and arm were noticed for two days previous to date of death. The child, who had always been very feeble, apparently died from general weakness.

"*Post-mortem* examination was refused, but permission was obtained to examine the bowels from the colotomy wound."

Dr. John Lindsay Steven gave the following details of the *post-mortem* examination and of the specimen:—

"The body was that of a small emaciated child. Permission was only granted to open the abdominal wound, which was found in the left iliac region. Here an artificial anus had been formed, and it was found possible to pass a bougie upwards and downwards through the opening into the intestine. A linear incision in the middle line was found in the region of the anus, not very deep. On passing the bougie down through the sigmoid flexure, the point could be made to bulge into the floor of this incision, and it was evident that there was only a very small layer of tissue between the point of the instrument and the surface of the floor of the perineal wound. With some difficulty, owing to the small opening, the sigmoid flexure and the other contents of the pelvis were removed *en masse.*

"On distending the rectum with water and pressing, it issued in an exceedingly fine stream from a minute aperture in the *cul-de-sac* which terminated the bowel. It is impossible to make water pass from the rectum into the bladder, and a probe passed into the aperture from which the water issues goes into the bowel, not into the bladder. This opening, then, is not the urethra. An opening is made into the apex of the bladder, which is then filled with water; on pressure, this can be made to pass through an aperture in front of that communicating with the rectum; this, then, is the urethra. It is evident, then, that the rectal *cul-de-sac* has communicated with the urethra by a very delicate channel in front of the prostatic portion."

Dr. Lindsay Steven had found it possible to remove the pelvic organs by the colotomy wound, and the specimen demonstrating the points described above was presented to the meeting.

The preparation is preserved in the Glasgow Royal Infirmary Museum, Series X, 94 A.

Mr. Maylard referred to a case of the same nature which had been under his care. He congratulated Dr. Fleming upon the success which had attended his operation. It was to be regretted that it had not been possible to complete the case by perineal incision, assisted by the presence of a sound introduced by the colotomy wound.

Dr. Fleming replied that the child had been so feeble that they had been afraid to do more than they had done. If it had survived, he had intended to complete the operation in the manner alluded to by Mr. Maylard.

Dr. Rutherfurd pointed out that it seemed possible to distinguish cases in which the communication was between the rectum and the bladder from those in which it was between rectum and urethra, more or less in front of the bladder; in the latter class of cases, as in the present instance, the bladder would not tend to get filled with fæces, and the urine would not be constantly mixed with fæces. In this class of cases the chances of life were obviously better, and there was also a presumptive possibility of making an artificial anus in the perinæum (either as a primary operation or after an inguinal colotomy); whereas, when the urine always contained fæces, the presumption would be that the opening of the bowel was into the bladder, and that the bowel was not within reach, or at all events more remote from the perinæum.

He referred to the diagrammatic representations of the various forms of this malformation in Mr. Ball's book on the rectum and anus.

IV.—SPECIMEN OF SARCOMA OF THE SMALL INTESTINE.

BY DR. FLEMING AND DR. J. LINDSAY STEVEN.

Dr. Fleming submitted the following clinical details:—

"Mrs. S., æt. 27, admitted 27th September, 1892; married, and has had two children.

"About two months before admission felt pain in left lumbar region, and at that time swelling was noticed by her medical attendant. She asserts that the swelling appears and disappears sometimes altogether. She cannot say whether this appearance or disappearance is associated with marked alteration in the amount of urine passed. When the swelling is at its maximum, she has increased pain on pressure, headache, and shivering; on the swelling subsiding, these leave.

"*Urine* normal, except excess of urates; very variable in quantity, but increase does not diminish the tumour.

"*Bowels* quite regular, and had always been so.

"*Tumour* can be felt apparently below the kidney, much in situation of spleen.

"I made an exploratory incision, finding the mass which I now show. In order to determine whether resection of bowel and tumour was feasible, I freed it pretty extensively, which probably had something to do with the fatal result."

Dr. John Lindsay Steven gave the following account of the specimen and the *post-mortem* examination:—

"The specimen consists of the pylorus, the whole of the duodenum, and about a foot of the jejunum. The tumour is situated in the wall of the first part of the jejunum, where a section of the gut has been made so as to show the interior. At the mesenteric aspect as well as at the free aspect, for a distance of two or three inches, great thickening of the wall of the intestine is observed. At the lower extremity of the tumour there is a very distinct narrowing of the lumen of the intestine caused by the tumour. Above this stricture the gut is dilated, even in that portion constituting what might be called the body of the tumour. At the free aspect of the intestinal wall the tumour tissue has a reddish colour, as if considerable hæmorrhagic extravasation had taken place.

"On microscopic examination the tumour is found to be a very small round-celled sarcoma, not very vascular at the part examined, and without stroma. The tumour structure is covered by the epithelial layers of the mucous membrane.

"At the *post-mortem* there was found widespread purulent

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from symptoms at first suggestive of dilated stomach, latterly of intestinal obstruction. She had been under the care of Dr. Watt of Ayr, to whom he was indebted for these details. Enterostomy was done by Dr. H. C. Cameron shortly before her death.

The structure of both tumours was that of a round-celled sarcoma, probably derived from the closed follicles of the intestine. Dr. Rutherfurd referred to an article on "Sarcoma of the Small Intestine" by Baltzer in *Langenbeck's Archiv*, vol. 44, heft 4.

Dr. Coats spoke on the question of the exact seat of origin of such tumours. He considered that in many cases, at least, they did not spring from the tissue mentioned by Dr. Rutherfurd, but from the glands in the mesentery.

V.—MICROSCOPIC SECTIONS FROM A CASE IN WHICH AMYLOID DISEASE—ESPECIALLY OF THE KIDNEYS AND INTESTINE—FOLLOWED REPEATED ATTACKS OF GONORRHŒA AND GONORRHŒAL RHEUMATISM.

By Dr. Joseph Coats and Dr. Carslaw.

The following is Dr. Coats's report of the *post-mortem* of this case:—

"*External Appearances.*—The body is generally pallid, but well nourished.

"*Chest.*—The *heart* is rather small, and the external fat is diminished. There are numerous small points of sub-pericardial hæmorrhage. The muscle is deep brown in colour, especially that of left ventricle. The *lungs* are slightly adherent at the apex. The right lung presents posteriorly a slight condensation. The pleura shows a slight fibrinous exudation, and a number of white nodules.

"*Abdomen.*—Both *kidneys* are much enlarged. The capsule is non-adherent, but the surface is somewhat irregular in the form of rounded granulations. On section the kidneys are seen to be generally pale in the cortex. The cortex is greatly thickened, and there is obscuration of the regular markings. In both kidneys there is thrombosis of the veins, which in the right kidney extends from the main renal vein into those of small calibre, whilst in the left kidney it is absent in the main vein, and is not present in every region of the kidney, being visible chiefly in those of the lower parts of the organ. In both kidneys the pelvis shows a deep red and sometimes slaty colouration. On testing a section of kidney with iodine a very obvious colouration is found in the form of dark streaks in the pyramids and dots in the cortex. *Spleen* is greatly enlarged, weighing 9¾ oz., and rather firm. Iodine shows slight amyloid disease. *Liver* is somewhat enlarged, weighing 66 oz. It is not to the naked eye obviously amyloid. There are a number of gall-stones in the gall-bladder; these are generally of considerable size and irregular in shape, but without obvious facetting. They are made up generally of a number of small calculi compacted together. *Urinary bladder* contains a small quantity of purulent urine in which a coccus, taken to be the gonococcus, is abundantly present. *Urethra* allows the passage of a full-sized catheter. The *small intestine* is highly amyloid as shown by iodine at various levels. In two places the ileum shows marked redness and hæmorrhagic infiltration of its mucous membrane. The large intestine shows in every region thickening and a certain granularity of its mucous membrane, and considerable narrowing of its calibre. This, while manifest throughout, is probably most marked in the rectum.

"The fluid from the *right knee joint* was examined soon after death for microbes, but none were discovered."

In showing the specimens, Dr. Coats remarked that it was customary to say that amyloid disease arose from prolonged discharge. In gonorrhœa the discharge or suppuration, so far as its substance was concerned, was trivial, and amyloid disease could scarcely be traced to this. The present case belonged to the category of gonorrhœa with gonorrhœal rheumatism, which meant that the poison of gonorrhœa had extended to the blood, and Dr. Coats connected the occurrence of amyloid disease with this extension to the blood. The whole tendency of the facts connected with amyloid disease was to show that that disease depended not merely upon the suppuration or discharge, but upon the poison associated with such processes. There were cases in which amyloid disease occurred where there was neither suppuration nor prolonged discharge—*e. g.*, in syphilis and in Hodgkin's disease; he had himself met with it in a case of the latter disease.

The localisation of the amyloid disease in the present case was curious. It was very extensive in the kidneys and intestine, but very slight in liver and spleen. In other cases they found other irregularities in its distribution.

Dr. Carslaw submitted the following clinical report:—

"The man, from whose body the specimens were obtained, had been, upon two occasions, a patient in the Western

Infirmary under the care of Dr. Finlayson, to whom I am indebted for permission to bring forward the case. The patient's first residence in the ward was in September 1891. On admission then he was 27 years of age, and stated that until 10 years previously he had enjoyed good health, but that when about 17 he had contracted a gonorrhœa, followed in a fortnight by an attack of rheumatism which had affected many joints, but in which the right knee joint had been most seriously involved. That was in 1881, and in 1883, 1885, 1889, and again in 1891 he had renewed attacks of gonorrhœa, followed, in each instance, by an affection of joints. On two of the occasions mentioned there was swelling of the testicles, and on each occasion, except one, he reports on inflamed condition of the eyes. Difficulties in regard to micturition, suggestive of cystitis, were present after his first attack, but are not again mentioned in the notes of 1891, though they were very evident during his more recent residence in the ward (1893). The 1891 attack of gonorrhœa was in February, and when he was admitted in September, urethral discharge had ceased, and rheumatism seems to have been represented only by stiffness in certain joints. At that time, indeed, the most striking symptoms were connected with the kidneys, and may possibly be dated back to 1885. After his gonorrhœal attack of that year (1885) he had what may be regarded as articular troubles, but there were also headache, sickness, and swelling of various parts, so that he describes his legs, whole body, and face as having become 'very stout.' These symptoms had disappeared only after a long illness, during which he was very breathless on exertion. On admission in September, 1891, he is reported as having a pale pasty complexion and slight puffiness of both ankles. The urine contained albumen abundantly (sp. gr. 1015), but no blood; with the microscope a few leucocytes were seen, but no tube-casts or crystals. During the first ten days of residence the quantity of urine did not average over 60 oz. in twenty-four hours, with average sp. gr. 1015. Afterwards the quantities became distinctly above normal, with several records of over 100 oz. in twenty-four hours. The averages for the first twelve days of October were—quantity 87 oz., sp. gr. 1017. Treatment during this first residence was by rest in bed, dieting, imperial drink, and tincture of steel. Patient improved very greatly, and gained 6 lb. in weight. He was dismissed on 22nd October, and it was then noted that he was free from dropsy, but that his urine still contained albumen.

"He was readmitted to hospital on the 14th of January last, and his story then was that he had continued well until November, 1892, when he acquired his sixth attack of gonorrhœa. Nine days before admission rheumatism began again, and on admission various joints were affected, but the right knee again most seriously. His heart, as during his first residence, seemed normal to physical examination. The urine, as before, was found to contain albumen in abundance: the average daily quantity between 15th and 20th January was 78 oz., with average sp. gr. 1015. No tube-casts were found, but the search for them was rendered difficult by the copious deposit of pus. The source of that pus was regarded as partly urethral (it could be pressed out by the meatus on handling) and partly vesical, for there were signs of cystitis in the great frequency of micturition and the suprapubic tenderness from which he suffered. The reaction of the urine was sometimes neutral, sometimes slightly acid. The quantity of albumen was quite beyond what would have been accounted for by the pus present. There was the account in the old report of dropsy and of albumen, apart from purulent sediment, and it was accordingly concluded that the patient still suffered from the chronic (parenchymatous) nephritis which had been diagnosed in 1891. In view of the discoveries made *post-mortem*, it is not out of place to say that the possibility of amyloid disease was not overlooked clinically, but was set aside, as no enlargement of liver or spleen could be detected, and there was absolutely no diarrhœa on admission. The question of syphilis was not discussed during patient's life, and all that can be said now is that there was no evident sign of that disease, or history of any suspicious symptom. He was married three years ago, and had one child, who is two years old and healthy.

"It has just been stated that there was no diarrhœa when the patient was admitted on 14th January. There was none up till the 22nd, but on that day a very severe diarrhœa began, associated with vomiting, but without elevation of temperature. This diarrhœa may be described as dysenteric, the motions containing blood and mucus. The patient rapidly sank and died on the 30th. It should be mentioned that he had never been abroad."

Dr. J. Lindsay Steven mentioned a case of amyloid disease which had recently been seen in the Royal Infirmary *post-mortem* room. The patient had died in the venereal ward, but had denied any venereal infection, syphilitic or gonorrhœal. He had been admitted to hospital because of double orchitis, and at the *post-mortem* pus had escaped from both testicles, but no external suppuration had been detected, and there was no history of any. Still they found the organs amyloid, the liver weighing 110 oz., and the spleen about 1 lb. There was surgical kidney.

VI.—CARD SPECIMENS.

A. By Professor Gairdner.

Specimen of Gangrenous Ulceration of Bowel (Syphilitic?).—A. E., æt. 28, ironmonger, admitted into Ward I, Western Infirmary, with gangrenous and phagedænic sores at various points (limbs, sacrum, &c.,) and deep ulcerations of palate, fauces, and tongue, suggestive of advanced syphilis, of which no positive evidence, however, could be obtained in the history. A cutaneous eruption, at first in part roseolar, but tending to be purpuric, and at last in large patches of well-developed purpura, was also apparent. Alleged date of symptoms five weeks. No fever. Six years before, an eruption, somewhat similar (so said), easily yielded to treatment. Urine albuminous, and reacting with guaiac. Improvement under treatment for three weeks, but then rapid decline with diarrhœa, and fresh purpuric eruptions. Death six weeks after admission.

B. By Dr. Fleming.

Papilloma of the Rectum.—The tumour is about double the size of a walnut. It is covered all over with close-set outgrowths, varying to some extent in thickness, but mostly stumpy, and nowhere filiform. Its central solid part consists of fibrous tissue, in which are vessels with well-formed walls. Its well-defined pedicle (about three-eighths of an inch in diameter) was attached about 2½ inches above the anus.

It was removed from a man about 60 years of age, who had been aware of its presence for thirty-seven years. During the most of that time he seldom went to stool without the tumour coming down and having to be pushed back.

C. By Dr. R. M. Buchanan.

Specimens of Coccidium Oviforme from the Liver of a Rabbit.—A number of microscopic sections were shown illustrating the nature of the coccidia and of the papillary growths associated with their development.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

NERVOUS DISEASES AND INSANITY.

By Dr. R. S. STEWART.

Progressive Primary Myopathy. By Blocq and Marinesco (*Archives de Neurologie*, March-April, 1892).—This case is that of a girl who, at the age of 14, first manifested signs of motor difficulties in the region of the face, and both shoulders and upper arms. The chief clinical features were slowly advancing paralysis and atrophy, without fibrillary tremors, contracture, vaso-motor troubles or reaction of degeneration. Death took place at the age of 21, and at the autopsy the brain and spinal cord were found to be entirely unaffected, the muscular fibres of the affected muscles atrophied and disintegrated in varying degree, and the peripheral nerves normal except for an unusual distinctness of what the writers call the *tubular systems*. These appear on cross section of the nerve as limited oval areas, lying towards the periphery of a nerve bundle, and represent profoundly modified nerve tubes, but inasmuch as they are found in sections of normal nerves, the writers do not regard them as having any pathological significance. The writers conclude that the view, held by Erb and others, that this condition depends on a central or spinal lesion, is untenable, and they regard it as primarily a purely muscular affection.

Gangrene of the Lip by Suction in a General Paralytic. By Vallon (*Archives de Neurologie*, March-April, 1892).—A hitherto unpublished example of the numerous mutilations inflicted on themselves by general paralytics by repetition of automatic movements. As the result of prolonged compression of the lower lip between the teeth, accompanied by suction, a large portion of the lower lip of a male general paralytic necrosed, and ultimately became separated, but, as indicated in the photographic illustrations, with little resulting deformity.

Hysterical Brachial Monoplegia. By Miura (*Archives de Neurologie*, May, 1893).—This writer's remarks are based upon the detailed observation of three cases and a review of twenty-eight, which he has collected from various sources. Twenty-three of these were males and only eight females. The age varied from 12 to 54 years, and most of the patients followed trades demanding a large expenditure of muscular force. In 13, neurotic heredity was very pronounced; in 8, slight; and in 9 the antecedents were unknown. In one case lead and alcoholic poisoning figured in the hereditary antecedents. Amongst predisposing causes in the individual were articular rheumatism, cholera, gout, lead poisoning, syphilis, and disseminated sclerosis. Most of the patients suffered in infancy from convulsions, incontinence of urine, and moral perversions. Of exciting causes the most common is traumatism; less frequent are lead poisoning, a hysterical fit, moral shock, exposure to cold and wet, and the fixing of a fractured limb. The duration of the "period of meditation," the interval between the occurrence of the accidental cause, and the appearance of the paralysis is variable, the latter sometimes supervening immediately, sometimes not until after an interval of from one night to twelve days. With the exception of one case, sensory troubles were always present, and in thirteen there also existed trophic troubles. The condition may disappear spontaneously or after psychical, electrical, or hydropathic treatment.

Psychoses after Influenza. By Althaus (*Journal of Mental Science*, April, 1893).—The discussion on this subject at the last meeting of the British

Medical Association was opened by Dr. Althaus, and among the many important points the following are noted:—Psychoses are not only absolutely, but also relatively more frequent after influenza than after other fevers; males show a greater liability than females, and as regards age a greater susceptibility is shown in the three decades from 20 to 50; hereditary or acquired predisposition plays a considerable part in the production of the post-influenzal psychoses, and the toxine of the malady appears to be more important than the fever, the initial feverish attack being in the majority of cases peculiarly mild. The duration of the mental affection is variable, 12·25 per cent recovering in a week, 32·5 within a month, and 55 lasting beyond a month. The prognosis is tolerably favourable, the percentage of recoveries being 56·6. The interval between the febrile attack and the onset of the psychoses varies considerably, but it is noted that delirious exaltation and mania are apt to follow very closely, that melancholia occurs from a few days to a few weeks after, and that general paralysis is usually latest to develop, the interval amounting sometimes to as much as six months. In the treatment of this variety of mental disorder, change of scene and air, and avoidance of excitement and worry are recommended. Insomnia is best combated by warm baths and sedatives such as paraldehyde, sulphonal, &c., and in the depressive types alcohol is indicated, while in general paralysis mercury and iodide are advised.

Scoliosis occurring in Primary Atrophic Myopathy. By Sacaze (*Archives de Neurologie*, May, 1893).—The unusual feature of this case, a lad of 16, is the occurrence of a high degree of vertebral deviation, attributable, in the writer's opinion, not to ligamentous or muscular changes, but to a trophic alteration of the bones of the spinal column, of the same nature probably as the muscular lesion.

Variation of Type in General Paralysis. By Bullen (*Journal of Mental Sciences*, April, 1893).—This writer concludes that, though in every particular the type of general paralysis cannot be said to have universally changed, yet it is probable that in some feature or another alteration is to be noted very generally, and that in some localities prominent changes are apparent in the whole form, and that evidence of variation is to be looked for in the following details:—Less sthenic type of mania, with lessened frequency of occurrence; greater frequency of primary demented cases; increased ratio of melancholic to maniacal symptoms; modification of age, duration, and distribution as to sex; variation in the relative frequency of convulsive and apoplectiform seizures—in a less sthenic character of the former, and in diminished fatal significance of them; a possible concurrent change in the meningo-encephalic adhesions.

Trional and Tetronal. By Mabon (*American Journal of Insanity*, April, 1893).—Both these drugs have a marked hypnotic and sedative action, but trional is more serviceable as a hypnotic, and tetronal as a sedative. The resulting hypnosis is calm, and resembles closely natural sleep, and in a few instances only were unpleasant after-effects noticed, not at any time alarming. Fifteen grain doses of either drug produced, in from fifteen to forty-five minutes, a sleep of from six to nine hours' duration. As a sedative, ten or fifteen grains of trional are required, and five or ten grains of tetronal.

The Blood in Melancholia, and the Effect of Systematic Tonic Treatment. By Steele (*American Journal of Insanity*, April, 1893).—From the observation of 35 cases this observer concludes that in melancholia there is a very marked deficiency of hæmocytes, with proportionate reduction of hæmoglobin; that the crenation of the hæmocytes, noted in a number of cases, is much less marked after tonic treatment; and that systematic tonic treatment is markedly efficacious in the treatment of this form of mental disorder.

Hydrotherapy in the Treatment of Nervous and Mental Disease. By Peterson (*American Journal of the Medical Sciences*, February, 1893). —This paper advocates a more general use of hydrotherapy in nervous and mental diseases, and contains many valuable hints as to the practical application of this method of treatment.

Reflex Locomotor Ataxy due to Phimosis, and Cured by Operation.—Chomatianos of Athens discusses in great detail a case which, so far as he can ascertain from the medical records, must be almost unique. "Reflex paraplegia" has long been a familiar expression, but in the present case the patient suffered from the typical symptoms of locomotor ataxy, and recovered on removal of the apparent exciting cause. The individual was a cavalry officer, æt. 58, who had never had syphilis, but who, a couple of years ago, began to suffer from balanitis, and a constantly increasing narrowness of the preputial orifice. Six months before he came under observation weakness set in in the legs. Then dysuria began, giving rise to great effort in emptying the bladder, but ultimately being replaced by complete paralysis of the sphincter, with incontinence. There were no lightning pains or girdle sensation, but he complained on walking that his feet seemed as if separated from the floor by a layer of soft felt. Ataxy was obvious, showing itself in the uncertain gait, with inability to step backwards, or to stand with the eyes closed. The patellar tendon reflex was abolished, and Argyll-Robertson's symptom was observed. Nothing abnormal was found by the ophthalmoscope. There was no evidence of local disease in the bladder, prostate, or rectum, and the urine was normal.

An operation was recommended for the phimosis, and after a week, during which the symptoms grew steadily worse, the patient agreed. The introduction of a large sound into the bladder put aside all suspicion of a urethral stricture.

A few weeks after circumcision the incontinence began to amend, and finally ceased. Thereafter the power of the legs was soon restored. The knee-reflexes and the contractility of the pupils under the influence of light returned, and the patient became as healthy as ever.—(*Le Progrès Médical*, 15th April, 1893.)—T. K. M.

Syringomyelia and Morvan's Disease.—The following are the conclusions of a recent writer (La Vecchia) on this subject:—

1. The localisation of the gliomatous process in the lumbar enlargement is not so rare as is commonly supposed.

2. Dissociation of sensibility is not confined to syringomyelia. It is met with in hysteria, in leprosy, and in traumatic hæmatomyelia; but it is not rare in Morvan's disease.

3. The identity of Morvan's disease and leprosy cannot be admitted. Clinical, anatomical, and bacteriological facts are opposed to such a view.

4. The difference between the clinical course of Morvan's disease and that of syringomyelia consists only in the relative frequency of certain symptoms, for all the symptoms of the one may be present in a case of the other disorder. In the one, the predominating symptoms (viz., motor and trophic) depend on a lesion of the anterior part of the cord; in the other, the chief symptoms are due to a lesion located more posteriorly.

5. Typical cases are by no means common. On the other hand, cases are not infrequent where the two types are mixed up.

6. It may be admitted, on *post-mortem evidence*, that in both affections there is a gliomatous process with identically similar characters. This may cause irritation of neighbouring tissues, and lead to ascending or descending degeneration; or it may be associated with other nervous lesions, and thus in different cases give rise to much diversity of symptoms.—(*La France Médicale*, 9th December, 1892.)—T. K. M.

MEDICINE.

By T. K. MONRO, M.A., M.B.

Duration of the Virulence of Tubercular Sputum.—According to Ducor, a sputum of this kind, thrown into certain parts of a room, may dry in, and remain virulent for more than two years. It may then give rise to a general or a localised tuberculosis, or to a scrofulous lesion. Too much importance, therefore, cannot be attached to the disinfection of apartments which have been occupied by phthisical subjects.—(*La France Médicale*, 31st March, 1893.)

Ascending Neuritis with Trophic Lesions.—Quinquaud showed to the French Society of Dermatology a man, æt. 50, who had erythemato-vesicular lesions on the dorsal aspect of the right hand and lower third of the fore-arm. These supervened on a wound of the hand which involved the index, middle, and ring fingers. The symptoms were, without doubt, due to an ascending neuritis. The three chief forms of sensibility were abolished in the affected region, but deep sensibility remained. The three digits were fixed in the position of flexion, and their temperature was much lowered.

Baths of corrosive sublimate solution, and dressing with wadding, brought about great improvement in the cutaneous lesions, which, indeed, soon healed almost completely; but, whenever the treatment was interrupted, they reappeared. This is a fresh proof that, in the matter of trophic disturbance, the lesion of the nerve is not the only factor, and that external conditions must be taken into consideration.

As to the prognosis of the case, it is not altogether unfavourable, for similar nervous lesions are sometimes found to improve after the lapse of months, or even of several years.—(*La France Médicale*, 17th March, 1893.)

Changes in the Peripheral Nerves in Cachexia Strumipriva in Man and in the Ape, and in Cretinism. (Langhans in *Virchow's Archiv*, Bd. 128, Hefte 2, 3).—The undermentioned changes were found in three human subjects from whom the thyroid had been removed; also in apes and in a cretin.

The blood-vessels, especially the capillaries, have very thick walls. The adventitia has a homogeneous appearance, with concentric striation, and is poorly furnished with nuclei. The lymph-spaces are dilated, like those under the perineurium and those in the endoneural connective tissue. In these spaces there are present, besides very fine longitudinal and transverse fibres, peculiar cells for which the author proposes the name "uni" and "multilocular bladder-cells." These bladder-cells are different from everything we are already familiar with. They possess practically no protoplasm. Each consists of a membrane, at one point of the inner surface of which—where, too, it is often drawn in like a hilus—there may be seen one, two, or more rarely three nuclei. From this, septa extend outwards, dividing the interior of the cell, which is as clear as water, into a varying number (6 to 20) of loculi.

Local lesions are also observed on the inner aspect of the perineurium. These consist in the development of flat bundles of fibres which run lengthwise, and in a localised dilatation of the peripheral lymph-spaces, which contain longitudinal and transverse fibres as well as bladder-cells. There are also seen peculiar cylindrical or spindle-shaped structures, consisting peripherally of a loose concentrically striated tissue, and in the middle of a homogeneous substance formed by degeneration of the fibrous tissue. The changes described may be observed all together, or they may occur separately.—(*Deutsche Med.-Zeit.*, 20th March, 1893.)

On Enlargement of the Spleen in Children, particularly in Connection with Rickets (Kuttner).—In rickets the spleen is enlarged, according to Monti, usually; according to Strümpell, almost constantly; according to Baginsky, not rarely; and, according to Gerhardt, in 35 out of 54 cases. On the other hand, Henoch states that splenic tumours are by no means uncommon in the earliest years of life, though he has seldom been able to make out a palpable increase in the size of the organ either in rickets or in congenital syphilis.

These differences of opinion on the part of such authorities induced the author to investigate the records of Prof. Ewald's clinique at the Augusta Hospital of Berlin.

It is of the first importance to have a good method of examining the size of the spleen in children, and the author believes the most satisfactory way is to have the child lying half on its back and half on its right side. If the child is then allowed to draw up its legs, and can be induced to take deep breaths, the abdominal wall will remain relaxed. The observer then takes up his position on the patient's right side, and, laying his right hand flat on the abdominal surface, can introduce his fingers beneath the lower costal margin, and feel the pole of the spleen projected downwards at each inspiration. Finally, the left hand may be placed at the child's back for bimanual palpation.

There is not much danger of mistaking a morbid condition of the colon for a splenic tumour, for the physical characters of the spleen, as made out by palpation, usually render that organ easily recognisable.

Percussion is much less to be depended upon than palpation, and inspection is still less reliable as an instrument of diagnosis.

For his present purpose, the author reckons as morbid every spleen that can be recognised by palpation at all.

The diseases that may give rise to enlargement of the spleen are very numerous. The most important are certain infectious diseases—enteric, recurrent fever, acute miliary tuberculosis, meningitis and pneumonia; sometimes infarction of the spleen, scurvy, inherited syphilis, and icterus. Some authors record a not inconsiderable enlargement in scarlatina, measles, erysipelas, and angina.

The author believes that in many of these cases of acute disease the splenic tumour has developed, not as a part of such disease at all, but from some different cause at a much earlier period of the patient's life, and that the onset of the acute disease has, for the first time, led to a thorough physical examination being carried out.

The chronic splenic tumour has been long known in connection with malaria, leukæmia, pseudo-leukæmia, and amyloid degeneration; but these affections are comparatively uncommon in infancy. And, with regard to rickets, as has been already stated, there is no unanimity of authorities.

The author's experiences are as follows:—Of 60 rickety children carefully examined by him, 40 had a palpable splenic tumour. Four children screamed so violently, and kept the abdominal wall so tense, that no certain data were obtained. In the case of the other 16 children, the spleen could not be felt. Fifteen children looked perfectly fresh and healthy; 37 were pale in colour, and 7 were markedly anæmic. In 50 cases there was some swelling of lymphatic glands. Five of the children were aged three months and under; 8 from four to six months; 25 from six to twelve months; 16 were in their second year, and 5 in their third year, while one was over six years of age.

These results will be seen to correspond pretty closely with Gerhardt's.

As to congenital syphilis, with regard to which Henoch differs so widely from other writers, the author's observations corroborate the views held by almost all physicians. He finds that in hereditary syphilis a splenic tumour is very frequently, though not invariably, to be detected. Among the 60 cases referred to, syphilis was only established with certainty in 2; but 13 of the mothers had had abortions or still-births.

Examinations of the blood were also made in the cases of syphilitic and rachitic enlargements of the spleen, but the variations in the number of red corpuscles, in the proportion between red and white, and in the amount of hæmoglobin, were so great, that no conclusion could be drawn therefrom as to the nature of the primary disease.

For the diagnosis, therefore, of splenic tumour, the most important thing is local examination, especially by palpation. The blood should next be examined, to exclude leukæmia. Then, as to the cause of the enlargement, we are in many cases not able to determine with certainty. The author, however, would remark that the occurrence of this condition in connection with rickets is not so surprising if we bear in mind how, in leukæmia, the characteristic lesions appear in the spleen, as well as in the lymph glands and bones. Rickets, therefore, which affects principally the bones, but very often causes glandular enlargement, might perhaps be expected to bring about changes in the spleen.

Treatment must be directed to the underlying constitutional state. Quinine and iron, and, later on, iodide of iron, are often beneficial. In rickets, phosphorus and cod-liver oil, and in infantile syphilis, iodide of potassium, should be given.—(*Deutsche Med.-Zeit.*, 16th March, 1893.)

On Latent Cancer of the Stomach. By Giavarini (Medical Clinique of Professor Galvagni of Modena).—The classical works on pathology make but brief reference to this condition, and even monographs, scarcely mention the various forms under which it may occur. Chesnel (*Étude Clinique sur le Cancer Latent de l'Estomac*, Paris, 1877) seems to have been the first to collect the cases recorded; he brought together fifty observations, most of them being of great interest. No one else, apparently, has, in recent times, attempted to deal with the subject.

All authors admit, says Chesnel, that gastric cancer may remain latent, manifesting itself by nothing but a slight dyspepsia, or by an unaccountable cachexia, but what no one has remarked is that it may produce ascites like cirrhosis, anasarca like Bright's disease; that it may imitate to perfection tuberculosis, chronic bronchitis, disease of the heart, liver, and so forth.

Chesnel recognises 3 groups of such cases: (1) where the patient is to all appearance healthy, and dies of some accidental ailment, which may, however, be a complication of the cancer itself; (2) where digestive disturbances are more or less clamant, but yet not characteristic; and (3) where cachexia exists alone or is the predominating feature of the case, and where the disease may assume the most varied aspects, and appear to involve the most distant organs. The first group rarely comes under the notice of the clinician, at least in time to complete a diagnosis. The proportion of cases in the second group will vary in accordance with the diagnostic skill of the physician, while the third category is of the highest importance, inasmuch as the mind of the observer may be turned to organs far removed from the seat of disease.

The symptoms of gastric cancer are most likely to be characteristic when the tumour is situated at the pyloric orifice, as this leads to dilatation and its consequences, and the part is more accessible to palpation. The difficulty is greater when the cardiac orifice is affected. If the tumour is in the stomach-wall, away from the orifices, the patient may feel well, and even though a tumour can be felt, it may be difficult or impossible to exclude disease of the pancreas or liver, or a fæcal accumulation in the colon, especially at the hepatic flexure.

In rare cases, however, latent cancer may be seated at an orifice of the stomach; and, on the other hand, a cancer occupying a very circumscribed area of the stomach may give rise to the classical symptoms; so that the situation is not everything. It is always important to consider how much of the mucous membrane still remains capable of carrying on the digestive function.

In a complete picture of such a case, we have local dyspeptic symptoms, general cachectic symptoms, and secondary phenomena (diarrhœa or constipation). The diagnostic worth of gastric symptoms is greater if they precede the others. Trousseau, in his *Clinical Lectures* [vol. v, p. 287.—Ed.], indicates the great probability, if not certainty, with which the supervention of phlegmasia alba dolens in the course of a cachectic disease, whose nature is obscure, points to cancer.

[The writer now proceeds to record in detail three cases met with in Galvagni's clinique.] These possessed the feature in common that the stomach was diminished in bulk, and confined under the arch of the diaphragm, so that the transverse colon took its place, to some extent, in the epigastrium, and masked the presence of the tumour. Such cases might be closely imitated by cancer of the body of the pancreas, which is wont to be associated with gastric and cachectic symptoms, strongly suggesting the dyspeptic variety of latent gastric cancer. In one of the three cases there was a rare form of tumour—medullary sarcoma—of the posterior wall of the stomach. In the second case there was a large medullary cancer of the posterior wall and small curvature. During life the patient's breath had a somewhat gangrenous odour, which was explained at the autopsy by the extensive necrosis in the tumour-mass. The diagnosis had been assisted by the excision and microscopic examination of part of what proved to be a cancerous nodule in the skin at the umbilicus. In the third case the *post-mortem* revealed a medullary cancer of the small curvature. This was completely unexpected, for all that could be made out from the symptoms and signs was functional weakness of the heart, from a cause unknown.—(*Rivista Clinica*, 1892, iv.)

Professional Fees.—The Nabob of Rampur has rewarded Dr. Freyer with a fee of £10,000 sterling for a three months' course of treatment for obstinate articular rheumatism.

In 1762 Dr. Dimsdale was summoned from England to St. Petersburg to vaccinate the Empress Catherine II. For this he received (1) £10,000 sterling as a fee, (2) £2,000 for the expenses of the journey, (3) the portrait of the Empress, (4) the title of Baron, the rank of State Councillor, and the dignity of Physician-in-Ordinary, (5) a life-pension of £500 a year.—(*Deutsche Med.-Zeit.*, 20th March, 1893.)

DISEASES OF THE THROAT.

By JOHN MACINTYRE, M.B.

Diphtheria; a Clinical Study. Munn.—This clinical study is well worthy of being read in the original, as many of the views bearing upon the etiology, pathology, and treatment are well tabulated. The author has made a very careful study of the figures bearing upon the deaths from this disease in Denver during the past five years. He has likewise a table giving his own experience as to the location of the false membrane, the age of the patients, &c. The subject is reviewed in a very careful way, and special portions are devoted to the relationship of scarlet fever and diphtheria; the identity of membranous croup and laryngeal diphtheria; the relationship of diphtheria and follicular tonsilitis. In the chapter upon treatment he reviews the result of the remedies now commonly employed in this affection. He states that the medicaments which gave the most satisfactory result were hydrogen dioxide, corrosive sublimate, carbolic acid, and lime water. While he has used trypsine an extract of pancreas, he does not consider it as valuable as corrosive sublimate or hydrogen-dioxide spray, which, by the way, he applies every hour or even every half hour.—(*Medical News*, 25th March, and 1st April, 1893.)

A Foreign Body Impacted in the Larynx for Seventeen Months; Removal by Laryngo-tracheotomy. Klinedinst.—The patient in this instance met with an injury from a weight falling upon him. After half an hour's unconsciousness it was discovered that a set of artificial teeth which he had been wearing was missing, and it was assumed that he had swallowed them. Laryngoscopic examination long afterwards revealed the presence of the foreign body, and it was removed successfully as above mentioned.

Indications for Tracheotomy and Intubation. Burrell.—The writer of this article makes a very fair statement about these two operations. He has not come to the conclusion, like some, that intubation will transplant tracheotomy. He believes that each operation is useful, but in a selected field; that these fields have not yet been defined. He trusts by careful consideration of the clinical condition of each patient, the anatomical situation and pathological character of the obstruction, to classify them. He gives a clinical classification of the types of dyspnœa due to obstruction, and gives the following indications for each operation:—

Indications for Tracheotomy.—Dyspnœa caused by pressure from new growths, enlarged glands, cellulitis of the neck, pressure on the recurrent laryngeal nerve (?), foreign bodies in the larynx or trachea; where new growths, fractures of the larynx or trachea (?), or where membrane (either diphtheric or fibrous) has extended well below the vocal cords.

Indications for Intubation.—In the early stages of croupy children; in the case of diphtheria where the membrane is principally in the fauces; in cases of dyspnœa in children dying of diphtheria, where the parents will not consent to tracheotomy.

Chancre of the Tonsils, with an Analysis of Fifteen Cases. Bulkley.—The author points out that this subject has not been very fully investigated. He quotes the authority of Professor Boeck to the effect that in Norway chancres occur oftener in this location than any other after the genitals. This, he considers, is due to the habit of various members of a family using the same materials in eating and drinking. He considers the tonsils are frequently attacked because they are so apt to be affected by inflammatory conditions. The act of deglutition is also favourable to the development of chancrous deposition. In Dr. Boeck's practice they constituted 14 per cent of his cases of extra-genital chancre. He considers that chancres are very apt to be overlooked in this region. The author states that in twelve of his cases the chancre was innocently acquired. He states that the characteristic features of the affection are enlargement of the tonsils, extreme hardness, superficial ulceration marked by sharply defined edges and enlargement of the lymphatic glands. The first thing noticed by the patient is a stinging pain in the tonsils, and more or less difficulty in swallowing.

The Morbid Anatomy of Hypertrophic and Atrophic Turbinal Disease.—Mr. Wyatt Wingrave, at the last meeting of the British Laryngological Association, read an interesting paper on this subject. He divided the hypertrophic cases into the following:—Vascular or cavernous, mucoid, lymphoid, glandular, and these in the order of occurrence. In the atrophic variety he states that the microscopic features generally associated with the disease might be described as follows:—Stratification of epithelium with desquamation, diminution of adenoid tissue, destruction of acinous glands, disappearance of venous sinuses. One of the most interesting points in his paper, however, is the presence of parasites in the form of protozoa. The author suggests the view that atrophic rhinitis is essentially an inflammatory disease of extremely slow progress associated with a particular form of parasite, but whether the psorosperm is merely incidental, or a potential cause, he does not know.—(*Journal of Laryngology*, April, 1893.)

The Singing Voice Improved by Nasal Treatment. Dr. Spear.—The author, after reviewing the recent physiology of the voice, with particular reference to the part played by the nostrils, records two cases in which treatment of the nostrils was followed by improvement in the singing voice.—(*Boston Medical and Surgical Journal*, 6th April, 1893.)

Recent Literature.—"Die adenoiden Vegetationen des Nasenrachenraums Hyperplasie der Tonsilla Pharyngea bei Kindern und Erwachsenen und ihre Behandlung." München and Leipzig: J. F. Lehmann.

"Die Lehre von den Naseneiterungen mit besonderer Berücksichtigung des Lieb und Keilbeins, und deren Chirurgische Behandlung." Grunwald, München.

"Maladies du Nes et du Larynx." Ruault.

"Psychopathia Sexualis, with especial reference to Contrary Sexual Instinct: a Medico-Legal Study." By Professor R. von Krafft-Ebing.

"Les Amygdalites Aigues." Sallard.

"La Diphtheria." Bourges.

"Les Neuropathies Laryngées." Luc.

"Mobilitatsneurosen des weichen Gaumens: Eine Klinische Studie." Rethie, Wien.

"Klinischer Atlas der Laryngologie und Rhinologie, nebst Anleitung zur Diagnose und Therapie der Krankheiten des Kehlkopfs, und der Luftröhre der Nasen und des Nasenrachenraums." Joh. Schnitzler, Wien.

"Transactions of the British Laryngological Association, 1892."

"Transactions of the American Laryngological Association, 1892."

New Instrument.—The well known American firm of Farny & Co. has brought out a mirror of the finest white crystal glass, silvered, and covered with cement, which makes it absolutely saliva proof. The mirror can be easily removed from the handle, and subjected to antiseptic solutions, or dipped in boiling water. The antiseptic advantages of such an arrangement are obvious.

Books, Pamphlets, &c., Received.

Essays on Rural Hygiene, by Geo. Vivian Poore, M.D. London: Longmans, Green & Co. 1893.

Forensic Medicine and Toxicology, by J. Dixon Mann, M.D. London: Charles Griffin & Co. 1893.

A Treatise on Ruptures, by Jonathan F. C. H. Macready, F.R.C.S. With 24 Lithographic Plates and Illustrations in the Text. London: Charles Griffin & Co. 1893.

A Text-Book of the Theory and Practice of Medicine, by American Teachers. Edited by Wm. Pepper, M.D., LL.D. In Two Volumes—Illustrated. Vol. I. Philadelphia: W. B. Saunders. 1893.

Carlsbad: a Medico-Practical Guide, by Emil Kleen, M.D. New York and London: G. P. Putnam's Sons. 1893.

The A B C Excerpta Therapeutica, 1893. London: Burroughs, Wellcome & Co.

Practical Observations on the Harrogate Mineral Waters, by A. S. Myrtle, M.D., and Jas. A. Myrtle, M.D. Fourth Edition, with additions. Harrogate: Robert Ackrill. 1893.

Outlines of the Diseases of Women, by John Philips, M.A., M.D. With 120 Illustrations. London: Charles Griffin & Co. 1893.

Year Book of the Scientific and Learned Societies of Great Britain and Ireland. Tenth Annual Issue. London: Charles Griffin & Co. 1893.

Selected Monographs on Dermatology. London: The New Sydenham Society. 1893.

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